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SECTION 01000

DESCRIPTION OF WORK

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

American National Standards Institute (ANSI):

ANSI C2	National Electric Safety Code

American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE):

Handbooks	Handbooks Refrigeration Fundamentals HVAC System and Equipment HVAC Applications
Standards	Ventilation for Acceptable Indoor Air Quality

Code of Federal Regulations (CFR)

29 CFR 1910	Occupational Safety and Health Standards - General Construction
29 CFR 1926	Occupational Safety and Health Standards - Construction Industry

Department of the Army, Corps of Engineers Manual (EM)

EM 385-1-1	Safety and Health Requirements Manual

Department of the Army, Corps of Engineers Regulation (ER):

ER 25-345-1	Military Publications System Operation and Maintenance Documentation

Department of the Army Regulation (AR)

AR 385-40	Accident Reporting Standards

Department of the Army Technical Manuals (TM)

TM 5-810-1	Mechanical Design, Heating, Ventilating, and Air Conditioning
TM 5-810-4	Compressed Air
TM 5-810-5	Plumbing

TM 5-811-1	Electric Power Supply and Distribution
TM 5-811-2	Electric Design, Interior Electrical System
TM 5-811-14	Coordinated Power systems Protection
TM 5-815-3	Heating, Ventilation, and Air Conditioning (HVAC)

Military Handbooks (MIL-HDBK):

MIL-HDBK-1008C	Fire Protection for Facilities Engineering, Design, and Construction
MIL-HDBK-1190	Facility Planning and Design Guide

National Institute of Technology and Standards

Handbook 135	Life Cycle Cost Analysis

National Fire Protection Association, Inc. (NFPA):

NFPA 70	National Electric Code
NFPA 80	Doors and Windows
NFPA 101	Safety to Life from Fire in Building and Structures

Building Codes (52.9101 - 4000 TM)

American Institute of Steel Construction (AISC)

American Concrete Institute (ACI)

Uniform Building Code (UBC)

Uniform Plumbing Code (UPC)
Uniform Mechanical Code (UMC)

Occupational Safety and Health Administration (OSHA)

29 CFR 1910, Publication V2206	OSHA General Industry Safety and Health Standards
29 CFR 1926	OSHA Construction Industry Standards.

One source of these regulations is OSHA Publication 2207, which includes a combination of both Parts 1910 and 1926 as they relate to construction safety and health. Contact the Superintendent of Documents, U.S. Government Printing

Office, Washington, D.C. 20402.

1.2 GENERAL REQUIREMENTS

As described in other sections of this contract, the Government intends to award a minimum of two contracts to 8(a) firms serviced by the Small Business Administration Hawaii District Office and a minimum of three contracts to other small or large businesses. All references to “contract” in this section shall mean one of the multiple award contracts awarded to a successful Offeror.

The contract will involve general construction, which may include, but are not limited to, civil, architectural, mechanical, electrical, security, correction of safety concerns, asbestos and lead abatement, and structural.

- Civil construction such as, grading, water lines, sewer lines, paving/repaving roadways, sidewalks, parking lots, shore protection, stream bank stabilization, and dredging.

- Architectural construction such as, painting, roofing, renovation of interiors of existing buildings, new building construction.

- Mechanical construction such as, heating, ventilation, and air conditioning (HVAC) systems and components, refrigeration systems, fire suppression systems, material transport systems, automatic box conveyor systems, incinerators, fuel lines, elevators, escalators, dumb waiters, as well as plumbing systems including water, solid and hazardous waste control.

- Electrical construction such as, power and service supplies, distribution, and utilization systems (including lighting), power generators and uninterrupted power supplies (UPS). Instrumentation work may include but is not limited to, plant management systems using direct digital technology, and fire alarm systems. Communications such as telephone and information management systems.

- Security construction such as, intrusion detection and surveillance systems.

- Asbestos, lead-based paint, and petroleum-contaminated material abatement and disposal.

- Structural systems.

This objective will be achieved through the issuance of task orders under the terms of the contract.

1.3 DEFINITIONS

- Site Survey: An inspection of a facility to evaluate areas that need work.

- Site Survey Report: Documentation of the findings and recommendations

resulting from the site survey and investigation of the proposed project.

- Feasibility Study: A study undertaken to determine the cost effectiveness of the proposed work.

- Proposal: Response to a Request for Proposal. A proposal may consist of conceptual plans and specifications for performance of the requested scope and/or costs to perform the requested scope.

- Construction: Execution of a set of plans, details, and specifications resulting in the repair or minor construction of a facility.

- Task Order: A task order issued to perform work that includes design and/or construction and may include other types of work associated with the work such as feasibility studies.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL

a. The work ordered through this contract will be for general construction and/or general design-build construction on real property within the jurisdictional execution authority of the Corps of Engineers, U.S. Army Engineer District, Honolulu in the State of Hawaii.

b. Each contract will be issued for a base period of 24 consecutive months from date of award, with provision for an additional 3 option periods, 12 consecutive months each. The combined total value of all task orders in all contracts issued will not exceed $250 million. The award of an option period to any contractor is at the sole discretion of the Government.

c. Issuance of a task order will constitute the Notice to Proceed (NTP) if sufficient bonding is available. If sufficient bonding is not available, NTP will be issued upon receipt of acceptable bonds. The task order performance period starts on the date the order is signed by the Contracting Officer/Ordering Officer or issuance of the NTP. Work on a task order shall commence immediately upon receipt of the signed task order or NTP.

d. Upon receipt of a task order NTP, the Contractor shall provide, all labor, materials, supplies, parts (to include system components), supervision, equipment, and related services, (except when specified as Government furnished), to perform all work in strict accordance with the terms, conditions, special contract requirements, specifications, drawings, attachments, and exhibits contained in the contract and task order or incorporated by reference. The scope of this contract covers a broad range of design and/or construction work. The Contractor may be asked to meet milestones as required by the installation. Work will vary from site to site and may require extensive knowledge of the functional operation relating to the efficient use of the facility’s equipment and support systems, and building structures. Some facilities may need to remain in full operation during the task order work. Where possible, the Contractor shall minimize all interference with the daily operations of Government

personnel and facilities.

e. The Contractor shall be familiar with, and all proposed work shall conform to, all applicable building and life safety codes (see paragraph REFERENCES). The Contractor shall be cognizant of any changes in the codes that impact the proposed work on the facility.

f. The Contractor's work and responsibility shall include all Contractor planning, programming, administration, and management necessary to provide all construction-related work (i.e. maintenance, repair, and/or construction) and other services as specified. The Contractor shall conduct all work in strict accordance with the contract and all applicable Federal, State, and local laws, regulations, codes, or directives. The Contractor shall provide related services such as preparing and submitting required reports, performing administrative work, and submitting necessary information as specified in this contract and within each task order. The Contractor shall ensure that all work performed meets the specified scope of work and any specifications or documents included with the individual task order.

g. The Contractor will be provided with a scope of work detailing the task(s) to be accomplished. The detail provided will vary from a general statement of what is required to complete design documents (drawings and specifications), depending on the method (Design-bid-build or Design-build), complexity and scope of the project. The Contractor will be required to use the information provided by the Government to prepare and submit a complete proposal reflecting the required task(s) to accomplish the provided scope of work, regardless of how much information is provided by the Government. Proposals may be requested requiring cost, time, and/or designs for the work. The submitted proposal shall be complete, to include all requested submittals and all cost factors, such as the labor, materials, equipment, and other costs, direct and indirect, necessary for performing the work required.

h. The Government will review all proposals and determine which contractor will be issued the work based on the proposal(s) received. The Government's objective is to issue task orders without negotiations. However, negotiations may be conducted if the Government determines it is necessary.

i. Upon issuance of a task order, the Contractor shall complete all work and services in accordance with the milestones established for each task order. Submittal dates, when applicable, will be included in the task order. Types and numbers of submittals, and dates and places for review meetings will also be stated in the task order.

3.2 MANAGEMENT ORGANIZATION

3.2.1 General

The Contractor shall maintain the management staff at full strength at all times in accordance with the qualifications and experience identified in the contract and the contractor's proposal for the contract (whichever is most stringent).

3.2.2 Organizational Changes

All changes to the qualifications and experience requirements identified in

the contract or the contractor's proposal for the contract shall be submitted to the Contracting Officer for approval prior to implementation.

3.3 CONTRACTOR RESPONSIBILITY

3.3.1 General

Upon issuance of a task order, the Contractor shall provide all labor, tools, equipment, transportation, materials, and supervision to safely and efficiently perform the work described in the task order.

3.3.2 Task Order Execution

The Contractor shall be responsible for all work necessary to complete the task ordered.

3.3.3 Codes and Standards

All task orders completed in this contract shall be performed in accordance with the latest edition of all applicable federal, state, and local laws and regulations, whichever is most stringent.

3.3.4 Internal Controls

The Contractor shall maintain an internal control system for identification, preparation, reproduction, distribution, and maintenance of all documentation, schedules and information necessary for its internal management of the individual task orders and the total contract.

3.3.5 Presentations and Meetings

The Contractor shall be responsible for attending all meetings required by contract and those required by each task order.

3.3.6 Permits

The Contractor shall be responsible for identifying and obtaining all required permits from all Federal, State, local, or installation agencies prior to the start of work.

3.3.7 Cooperation/Coordination with Installation Staff

The Contractor may be required to provide a briefing to the installation staff prior to starting work. The briefing will provide the scope of work of the task order and a schedule for completing the work. While the Contractor is onsite and construction is underway, weekly coordination meetings may be required with the installation's points of contact. The purpose of these meetings will be to anticipate and schedule all operations where mutual effort by both groups is required.

3.4 CONTRACTOR SELECTION

3.4.1 General

Work will be issued in the form of Task Orders using DD Form 1155, Order for Supplies or Services. The specific tasks to be performed will be identified in the task order documents. The Contracting Officer or Ordering Officer

shall have the right to modify the requirements and performance periods of tasks in the task order. All task order submittals and end products are the property of the US Government. The Contracting Officer will be the final determining authority on the issuance of task orders.

3.4.2 Fixed Price Task Orders

3.4.2.1 General

In accordance with the solicitation provisions, each Contractor shall be afforded a fair opportunity to be considered for each task order in excess of $7,000,000.00 unless one of the conditions identified in Special Contract Requirements, S-25, Award of Task Orders Under Multiple Award Contracts, subparagraph d applies. Task orders under $7,000,000.00 will be limited to competition among 8(a) firms unless one of the conditions identified in Special Contract Requirements, S-25, Award of Task Orders Under Multiple Award Contracts, subparagraph d applies. Any requirement under $3,000,000.00 may be sole sourced to an 8(a) awardee.

3.4.2.2 Limited Competition Procedure

To facilitate the consistent and timely award of task orders, the following procedures will be used to the maximum extent practicable:

a) The Government will prepare and issue a request for proposal (RFP) for the proposed task order. RFP's may be written or oral. The RFP will describe the proposed Task Order work and will identify a cut-off date/time before which the proposals must be submitted to the Contracting Officer. Upon receipt of an RFP, Contractors must submit a proposal. Each Contractor shall submit four complete copies of its proposal within a single sealed envelope. The Contractor shall identify on the outside of the envelope that the envelope contains the Contractor's proposal for the particular task order identified in the RFP.

b) All proposals will remain in the sealed envelopes until the date and time specified in the RFP. The Government will open all envelopes on the specified date and time. The Government will evaluate the proposals submitted by all the Contractors using the evaluation factors identified in paragraph 3.4.2.3 below.

c) The Government's objective is to issue task orders without negotiations. The Task Order will be issued to the selected Contractor and a letter sent to the non-selected Contractors informing them of the selection.

d) If issuance of a Task Order cannot be made without conducting discussions or negotiations, the Government will schedule discussions/negotiations with the Contractor(s) determined to be in the competitive range. At the conclusion of these sessions, the Contractor(s) will be instructed to provide revised proposals by a specified date and time. The revised proposals will be submitted and processed/evaluated as described in paragraphs a through c above. If the task order can be issued without further discussions or negotiations, the task order will be issued to the selected Contractor and a letter sent to the non-selected Contractors informing them of the selection.

e) If requested, the non-selected Contractors will be given an opportunity for a debriefing, at which time the reasons for non-selection will be reviewed.

3.4.2.3 Evaluation Factors

The Government will consider one or more of the following factors when evaluating contractor’s proposals for each task order. The Government might also identify other factors that are specific to an individual task order. The Government will identify all factors and relative weight of the factors in the RFP for each task order.

a) The Contractor's proposed task order price;

b) The Contractor's proposed performance schedule for the task order;

c) Impact to ongoing contract work when the new task order is incorporated into the Contractor's schedule;

d) The Contractor's demonstrated understanding of the proposed task order work;

e) The Contractor's past performance under the contract for all completed task orders; the Contractor's past performance on similar or related task orders completed under the contract; and the Contractor's current performance on similar or related task orders issued under the contract; and

f) The existence of ongoing or scheduled work by a Contractor in the location where the task order will be performed.

3.4.2.4 Proposal Submittal Requirements

At a minimum, the following will be required on each task order submission:

a) Provide the total task order price, a breakdown of the price, and any optional or additive line items identified in the RFP. The proposed prices will be compared to each other as well as to the Government's Estimate for the task order.

b) Proposals must contain a resource-loaded CPM (critical path method) schedule prepared in accordance with Specification Section 01320, "Project Schedule." The contractor’s CPM schedule will be used to validate the contractor’s proposed performance duration for the task order. The submitted CPM schedule will be reviewed by the Government to evaluate the reasonableness of the Contractor's proposed task order duration and will serve as an additional indicator of the Contractor's understanding of the proposed task order work. The schedule shall include an assumed date of issue for the Task Order (normally within thirty (30) calendar days after the proposal submission cut-off date), include all significant features of the work, and result in a complete task order performance duration that can be used regardless of the exact date the task order is issued.

c) In addition to the CPM schedule for the specific task order, the Contractor shall also provide a separate resource-loaded CPM schedule that reflects all ongoing contract task order work that reflects how the Contractor proposes to incorporate the new task order with the ongoing

task orders. The Government prefers that new task order work be accomplished with the ongoing contract work without delaying the completion of any of the ongoing, previously established task orders. However, if any ongoing task orders must be delayed as a result of incorporating the new task order into the schedule, the Contractor shall specifically identify the task orders that will be affected, the resulting delays, and the costs associated with those delays so that the affected task order schedules and the contract schedule can be modified appropriately should the Contractor be issued the work.

d) The schedules submitted by the Contractor will be used by the Government to evaluate the reasonableness of the Contractor's proposed task order schedule and duration, the impact of incorporating the new task order work into the ongoing contract schedule, and to confirm the Contractor's understanding of the proposed task order.

3.4.2.4.1 Profit Determination

The required method for calculating profit on all task orders and modifications on this contract will be the EFARS 15.9 "Alternate Structured Approach to Weighted Guidelines Method." A sample worksheet is included at the end of this section as Attachment 1. Include a copy of the completed worksheet with all task order and modification proposals.

3.4.2.5 Notification of Non-Selection

Within seventy-two (72) hours of issuing the task order, the Contracting Officer will send written notification to the non-selected Contractors of the selection. The non-selected Contractors will be afforded an opportunity for a debriefing if a written request is submitted to the Contracting Officer within seventy-two (72) hours after receiving the notice of non-selection. If the non-selected Contractors do not submit a written debriefing request within this timeframe, no debriefing will be conducted.

3.4.2.6 Non-Selection Debriefing

If the non-selected Contractors request a debriefing within seventy-two (72) hours after receiving the notice of non-selection, a debriefing will be scheduled. During the subsequent debriefing, the Government’s reasons for non-selection for that specific task order will be reviewed with the non-selected Contractor(s). The purpose of the debriefing is not to change the Government’s selection for that task order, but instead is intended to allow the contractor to identify and improve any identifiable weak areas in its proposal for subsequent task orders. Non-selection for award of any given task order shall not be subject to the Contract Disputes Act of 1978

3.4.2.7 Task Order Issue

The selected contractor will be issued a fixed-price, lump sum task order. The task order documents will identify the performance requirements, including any milestones and the required final completion date.

3.4.2.8 Notice to Proceed

The task order performance period starts on the date the order is signed by the Contracting Officer/Ordering Officer or receipt of NTP (if sufficient bonding is not available). Work on a task order shall commence immediately

upon receipt of the signed task order or NTP.

3.5 ENVIRONMENTAL PROTECTION

All work shall be performed in accordance with Section 01430, Environmental Protection.

3.5.1 Smoking Policy

There will be no smoking within any Government facilities. However, if approved by the facility manager, a smoking area may be designated a minimum of 50 feet away from the facility and all material storage areas.

3.6 ASBESTOS AND/OR LEAD-BASED PAINT ABATEMENT (REMOVAL OR ENCAPSULATION)

When work is in areas suspected of containing asbestos, OSHA Standard 29 CFR 1910.1001 shall apply. OSHA Standard 29 CFR 1926.1101 requires that asbestos be presumed to be present in all facilities constructed before 1980. Under this standard, where insulating or surfacing materials cannot be identified not to be or not to contain asbestos, they will be assumed to be or contain asbestos and appropriate safety procedures shall be taken. The contractor shall, when tasked to do so in the task order, undertake the sampling and testing required to make this determination as well as carry out the resultant abatement . The provisions of OSHA Standard 29 CFR 1926.22 shall apply to the handling of lead-based paint. The Contractor shall identify and abate lead-based paint when required to do so by the task order.

3.7 SITE SECURITY

The contractor is responsible for ensuring security at the worksite. The contractor shall maintain the site and all other contractor-controlled areas in such a manner as to minimize the risk of theft, vandalism, injury, or accident. The contractor shall comply with all Base security regulations.

3.8 PUBLIC AFFAIRS

The contractor shall not disclose any data generated or reviewed under this contract to any parties outside the contract. All requests for information concerning site conditions shall be referred to the Contracting Officer or Ordering Officer for comment.

END OF SECTION 01000

EFARS 15.9 “Alternate Structured Approach to Weighted Guidelines Method”

PROJECT TITLE:
CONTRACT No.: PROFIT FOR:
TASK ORDER No.: ESTIMATED BY:

FACTOR (a)	RATE (b)	WEIGHT (c)		VALUE (b x c)
1. Degree of Risk	20			
Very low		0.030		
Mod low		0.050		
Average		0.075		
Mod high		0.110		
High		0.120		
2. Relative Difficulty of Work	15			
Very simple		0.030		
Simple		0.040		
Average		0.075		
Complex		0.110		
Very complex		0.120		
3. Size of Job	15			
< $100,000		0.120		
0.1 - 1.0 million		0.110		
1.0 - 2.0 million		0.100		
2.0 - 2.5 million		0.090		
2.5 - 3.5 million		0.080		
3.5 - 4.0 million		0.070		
4.0 - 4.5 million		0.060		
4.5 - 5.0 million		0.050		
5.0 - 10.0		0.040		
> 10 million		0.030		
4. Periods of Performance	15			
Short (< 30 days)		0.030		
Mod short		0.050		
Average		0.080		
Mod long		0.100		
Long (> 2 years)		0.120		
5. Contractor's Investment	5			
None		0.030		
Little		0.050		
Average		0.070		
Mod high		0.090		
High		0.120		
6. Assistance by Government	5			
None		0.120		
Small		0.090		
Moderate		0.070		
Mod large		0.050		
Large		0.030		
7. Subcontracting	25			
0%		0.120		
0% - 20%		0.100		
20% - 40%		0.080		
40% - 60%		0.050		
60% - 80%		0.030		
		TOTAL PROFIT		

SECTION 01012
DESIGN AFTER AWARD
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5.2 HAZARDOUS MATERIALS ABATEMENT WORK PLAN

PART I GENERAL

This section lists items that must be submitted for review at various times during the preparation of the construction plans and specifications for individual Task Orders requiring design after Award (Design-Build). Each Task Order that involves a requirement to perform Design after Award will include specific criteria for various aspects of the work to be performed and the Works to be constructed. The following paragraphs are provided to illustrate to the Offerors the level of information that may be provided in such individual Task Orders, along with the typical minimum requirements that may be anticipated to satisfy the requirements of these Task Orders.

A meeting with the Government is required following contract award, referred to as the “Proposal Design Documents Review Meeting.” For fulfillment of design requirements for Design-Build Task Orders, Design submittals are generally required at the 65% design stage, 95% design stage and at the 100% design stage. However, specific submission requirements may vary with each Task Order based on schedule and level of development of the design provided in the Task Order Request for Proposal (RFP). Specific design submission requirements shall be specified in each Task Order. Design submittals must comply with all requirements stated in the Task Order. In the event of any conflict between the Task Order criteria, the criteria set forth in the Contract, and the Contractor’s submittals, the Task Order criteria will govern. Any changes to criteria set forth in the Task Order shall be made in accordance with Section 00700, 52.243-4, Changes, (8/87).

The Contractor shall provide design submittals for review by the Government according to the project schedule submitted and approved. Specific milestones for submittals, quantities, and delivery instructions for design submittals shall be set forth in individual Task Orders.

1.1 GOVERNMENT REVIEW COMMENTS

a. NAS Schedule shall along with schedule for design submittal include review conferences and shall incorporate the required periods for Government review as described herein. The NAS for individual Task Orders shall include scheduled Government review periods to include any specific milestones set forth in the Task Order. Changes to schedule or progress slippages of any activities related to design submission and required review activities shall be reflected in the NAS schedule for the Task Order and impacts to the milestones and required completion date for the project be evaluated and processed.

b. Task Order design submittals and design review shall generally be as follows:

1. After receipt of the 65% submittal, the Government shall have thirty (30) days for review and comment. After receipt of the 95% submittal packages, the Government shall have thirty (30) days for review and comment. A review conference shall be scheduled at the location designated in the Task Order during the first week after that period. The review will be for conformance with

the requirements of the solicitation and the Contractor's proposal. Provide annotated comments no later than five days following 95% review conference. Submit 100% design analysis, drawings, and specifications no later than 15 days following 95% review conference.

2. At the review conferences, or just prior to the conference, the Government will furnish the Contractor comments from the various design sections and from other concerned agencies involved in the review process. The Contractor shall bring key design personnel for each discipline to all review conferences. During the conferences, the Contractor will either accept the comments, with or without provisions, or have comments withdrawn if generally agreed upon. Acceptance of and incorporation of comments that constitute a change to the scope of work and/or criteria set forth in the Task Order shall not be affected except under the changes clause set forth at Section 00700 of the Contract.

c. Review Conferences: Review comments provided to the Contractor will not necessarily indicate coordination requirements with other parts of the submittal. The Contractor shall incorporate and coordinate the accepted review comments into each affected part of the next design submittal.

d. Conference Records: The Contractor shall, within seven (7) working days after each conference or discussion, either telephonic or in person, prepare a written record of the meeting and/or discussions and furnish two copies to the Project Manager identified in the individual Task Order. The written report shall include the project name, contract number, subject, the name of the participants, an outline of discussions, the recommendations, and conclusions. All meetings, site visits, review conferences, and telephonic discussions require written records. The Contractor shall provide copies of conference records to the designated Administrative Contracting Officer identified for the individual Task Order.

e. Annotating Review Comments: The Contractor shall ensure all members of the design team have access to Dr. Checks. The Contactor shall contact the Project Manager for the individual Task Order for assistance in accessing this web-based system. After each submittal, the Government will provide the Contractor with design review comments from the various reviewers and concerned agencies involved in the review process. All of the Government review comments will be posted in Dr. Checks Review System three (3) days before the review conference. The Contractor shall post designer response (accept, non-concur). The Government reviewers may post additional review comments after the period specified herein, but the Contractor is not expected to respond to those newer comments until the review conference. The contractor shall run a copy of all comments and responses and newer comments posted in Dr. Checks at noon (or after) on the workday before the review conference. The Contractor shall make 25 copies for distribution at the review conference. The Contractor shall post in Dr. Checks the disposition of each comment from all formats at the presented at the review conference within three (3) days of the conference. Review comments remaining outstanding or requiring further action by the Contractor's designer shall be annotated accordingly. As

the Contractor incorporates accepted comments into the design during the next phase of design, he shall provide “designer annotations” into Dr. Checks. Prior to the next submittal the Contractor shall ensure all designer responses have been entered as to the disposition. The Contractor shall furnish a hardcopy of the disposition of all comments with the next scheduled submittal. The disposition will clearly indicate the specific actions taken in response to each comment. Merely stating “concur” or “will comply,” is not considered an adequate indication of actions taken. The Contractor is cautioned that if he/she believes the action required by any comment exceeds the requirements of the Task Order, he shall take no action other than to advise the Contracting Officer. Changes to work or services to the general scope of the Task Order shall be authorized only by the Contracting Officer in accordance with Section 00700, 52.243-4, Changes, (8/87) of the Contract.

1.2 DESIGNER OF RECORD

a. The Contractor shall for each Task Order identify, for approval, the Designer of Record for each area of work. One Designer of Record may be responsible for more than one area of the Task Order provided he or she is a registered professional in that discipline in the State of Hawaii. The Designer(s) of Record shall stamp and sign all 100% design drawings.

b. Upon contract award the Contractor shall submit to the Administrative Contracting Officer or Contracting Officer’s Representative designated for the individual Task Order, a list of the Designers of Record.

c. The Designers of Record shall review and approve all construction shop drawings and submittals in accordance with Section 01330 Submittals. The designers of Record shall also be responsible for the responses to “Requests for information” (RFI’s), applicable to their area of design responsibility. The Designers of Record shall also sign and date all RFI responses.

1.3 INDEPENDENT DESIGN DOCUMENT REVIEW AND CERTIFICATION

a. The Contractor shall ensure that all design documents submitted after award of the individual Task Orders, including all drawings and calculations, are reviewed by a registered senior engineer/architect in the required discipline, including fire protection engineer, who is independent from and not associated with the design. The independent reviewer may or may not be associated with the organization having done the original design.

b. The independent reviewer must submit a signed letter of certification at each review conference for each design submittal stating also that he or she has reviewed the design documents for that discipline and that he or she agrees that the design is complete, correct, and in conformance with the requirements of the TASK ORDER.

1.4 DOCUMENT SETS

DOCUMENT SETS SUMMARY					
		Post-Award Review Conference	*65% Design Submittal*	*95% Design Submittal*	*100% Design Submittal*
Design Analysis			*35 copies*	*35 copies*	*35 copies*
Drawing Sets	*½ size*	*15*	*35*	*35*	*35*
	Full size	*2*			
	CD-ROM		*2*	*2*	*2*
Specifications		*15*	*35*	*35*	*35*
Interior Design Package			*2*	*2*	*2*
Demolition Work Plan				*Yes*	*Yes*
Shop Drawing Register				*Yes*	*Yes*
Hazard Abatement Work Plan					*Yes*
Independent Review Certification			*Yes*	*Yes*	*Yes*
DD Form 1354				*Yes*	
Annotated Review Comments			30	*30*	*30*

Note: Additional backcheck copies (to match those submitted in the 100% submittal) will be required if all comments were not addressed on the 100% submittal.

PART II POST-AWARD DESIGN REVIEW CONFERENCE

2.1 MEETING PURPOSE

Following Task Order Award the Contractor and leaders from each of the Contractor's design disciplines shall meet with project stakeholders from the Government. At this meeting stakeholders will discuss elements of the Contractor's design solution submitted as a part of his proposal. Comments and discussions may cover a wide variety of issues from color scheme to functional layouts. The goal of this meeting is to fine tune the design to best meet stakeholder needs that are within the Scope of Work of the Task Order . Fast tracking and other scheduling concerns the Contractor may have will be identified and discussed. Any documents required of the Contractor to facilitate the Post Award Design Review will be addressed in the individual Task Orders.

2.2 MEETING FOLLOW-UP

Following this meeting the Contractor will prepare written documents, sketches, etc., that address and confirm design assumptions made pursuant to the discussions at the meeting and forward them to the Administrative Contracting Officer or Contracting Officer's Representative designated for the Task Order.

PART III 65% DESIGN SUBMITTAL REQUIREMENTS

3.1 DESIGN ANALYSIS (DA)

The 65% Design Analysis shall follow the format presented in Appendix B of ER 1110-345-700 available on the Corps of Engineers “Techinfo” web site (http://www.hnd.usace.army.mil/techinfo/) excluding part 6 “Exceptions to
Appendix B, Requirements.” The Contents shall include design calculations for all disciplines specific to the individual Task Order and the incorporated Contractor’s proposal.

3.2 INDEPENDENT REVIEW CERTIFICATION

Signed letter of certification from independent reviewer for each design discipline stating that he/she has reviewed the 65% Submittal design documents for that discipline and that he/she agrees that the design is complete, correct, and in conformance with the requirements of the Task Order.

3.3 DESIGN DRAWINGS

Drawings for the 65% submittal shall follow the format presented in Appendix C of ER 1110-345-700 for standard and definitive design drawings and specifically shall follow the Honolulu District Corps of Engineers guidelines. Drawings shall follow the graphic standards and border selections to match Honolulu District Corps of Engineers standards. Drawings shall be drawn in English units and metric (in parenthesis) using MicroStation Version 8 or the latest format. The drawing set shall include the following as a minimum.

3.4 REQUIREMENTS BY DISCIPLINE

a. CIVIL

1. Design Analysis – description of site conditions, technical references (codes, manuals, directives), foundation report and recommendations, fire protection analysis of existing water distribution system. Include product selection and cut sheet information, and a list of questions needing user clarification/action. Site design/earthwork narrative with thorough discussion of site grading, earthwork, classified soil materials, compactive effort, testing/inspection, circulation/site issues, amenities access/parking issues, geofabric materials, structural sections. Include all calculations or assumptions for site improvements, drainage stormwater routing and other as necessary. Paving narrative shall include a discussion of paving criteria as specified in Task Order; job mix design including ability to meet Task Order criteria, performance requirements and material criteria. Underground utilities shall include a thorough discussion for each utility system including fire hydrants, domestic water supply, sanitary sewer, piping materials; all necessary utility

fittings and appurtenances in accordance with Task Order stated requirements.
2. Location and Vicinity Map.
3. Site Plan with typical section cuts and pavement cuts (Scale 1:250).
4. Grading Plan w/ contour lines at 0.5-meter intervals and spot elevations to 0.001-meter accuracy. Show new and existing storm drain lines and inlets.
5. Utility Plan showing all utilities and associated products, (cleanouts, manholes, fire hydrants, valve boxes, etc.) existing water lines, points of connection, and relocations. Show all new work in association with the site survey.
6. Utility and storm drain profiles/details.
7. Soils boring logs (if additional borings done).
8. Subsurface investigation site plan (if additional borings done).
9. Specifications shall include but not be limited to site preparation, earthwork, aggregate materials, culverts, U.G. insulation, geofabric, and site signage.

b. LANDSCAPING

1. Design Analysis, including catalog cuts for signage, edging materials, and other appurtenances; plant list and maintenance requirements, and mix percentages for soil, mulch, seed, fertilizer, limestone.
2. Landscape plan showing areas to be planted and site features.
3. Specifications outline to include topsoil, seeding.

c. ARCHITECTURAL

1. Design Analysis – project scope, complete code analysis including life safety, description of systems and their insulating values (foundation, floor, wall, roof), statement of functional arrangement of spaces.
2. Cover sheet with Drawing Index, Legend, and Code Analysis.
3. Floor Plans, 1:100 scale, (include gross and net area analysis).
4. Enlarged floor plans, 1:25 scale.
5. Roof Plan, 1:100 scale.
6. Exterior Elevations, 1:100 scale, showing all exterior surfaces.
7. Building Cross Sections, 1:50 scale.
8. Exterior Wall Sections, 1:10 and 1:5 scale.
9. Interior Wall Sections (each type and referenced fire-rated assemblies), 1:10 and 1:5 scale.
10. Door Schedule, Window Schedule, door and window types illustrated.
11. Finish Schedule.
12. Reflected Ceiling Plan, 1:100 scale.
13. Enlarged Plans, 1:50 scale.

d. STRUCTURAL

1. Design Analysis - technical references (codes, manuals, directives), design criteria (dead and live loads), list of criteria questions needing user clarification/action, gravity and lateral framing system (primary and secondary members), and their connections.
2. Miscellaneous Analysis Supporting Architectural, Civil, Mechanical and Electrical Disciplines Interfacing with the Structural Frame and Elements.
3. Foundation Plan.
4. Structural Steel Framing Plan.
5. Shear Framing Elevations.
6. Floor/ceiling Framing Plan of support areas.
7. Layouts of expansion, construction or control joints showing dimensions.
8. Roof framing plan.
9. Wall section through foundations, floors and roof framing with dimensions.
10. Sections and details on footings and member sizes of anchor bolts, bearing plates and reinforcing, etc.
11. Sections and details on connections, bracing, diaphragm, etc.
12. Details on crack control joints, construction joints, additional reinforcement on large opening, header beams, or any special items.
13. Column connection details.
14. Framing member, column, beam and truss schedules as applicable.
15. Foundation schedule.
16. General notes, code analysis, soils data, design live loads and material specifics.

e. MECHANICAL

1. Design Analysis:
   a) Plumbing Design Analysis shall include system narratives with thorough discussion of domestic water, rainwater, waste and vent piping systems. Discussion shall include piping materials and equipment selection and cut sheets. The design analysis shall include the following calculations: Piping sizes based on UPC fixture count and Hunter Curves.
   b) Air Conditioning Design Analysis shall include system narratives with thorough discussion of piping systems. Discussion shall include piping materials, pump curves, and equipment selection and cut sheets. Include the following calculations:
      1) Cooling load calculations.
      2) Energy Budget calculations.
      3) Piping size calculations.
      4) Terminal unit calculations and selections.
      5) Head loss calculations and pump selections.
      6) Steam and condensate main anchor and expansion calculations.
      7) Sizing calculations and equipment selections of:
         a. Glycol to glycol shell and tube heat exchanger
         b. Pressure reducing valves w/valve Cv’s

c. Control valves w/valve Cv's

c) Ventilation Design Analysis shall include system narratives with thorough discussion of the building mechanical room ventilation, and miscellaneous building exhaust systems. Include equipment selection and cut sheets. Required calculations:

1) Static pressure calculations for mechanical room fan and miscellaneous exhaust systems.

2) Sizing calculations and equipment selections of toilet exhaust fans and all mechanical room air distribution louvers, diffusers, registers and grilles.

2. Mechanical Drawings:

a) Mechanical Legend/Notes.
b) Mechanical Equipment Schedules.
c) Plumbing Layout Plans, 1:100.
d) Air Conditioning Layout Plans, 1:100.
e) Mechanical Room Layout Plans, 1:25.
f) Plumbing Isometrics/Details.
g) Air Conditioning System Diagram/Details.
h) Seismic Bracing Details.
i) Utility Layout Plans.
j) Control Diagrams and Schematics.

f. ELECTRICAL – EXTERIOR

1. Site Plan(s): including medium and low voltage feeders, transformers, telecommunications service entrance, cable television service entrance.
2. Grounding Plan: indicating lightning protection system, ground conductors, electrodes, receptacles, bonding locations and means for bonding.
3. Exterior Lighting Plan.
4. Electrical One-Line diagrams/Details.

g. ELECTRICAL – INTERIOR

1. Power Plan 1:100.
2. Lighting Plan 1:100.
3. Special Systems including: communications and cable television.
4. Panel board and Lighting Fixture Schedules: Panel board schedules shall include the designation, location, mounting (flush or surface), number of phases and wires, voltage, amp capacity and total connected load. Indicate the trip rating, frame size, interrupting rating and number of poles for each circuit breaker in the panel boards. List the circuit number, circuit description and load for each branch circuit.
5. One-line diagram for power distribution.
6. Grounding Plan: indicating lightning protection system, ground conductors, electrodes, receptacles, bonding locations and means for bonding.
7. Locate all light fixtures, controls, power, detectors, and emergency systems.

8. Electrical Details.

h. HAZARDS ABATEMENT –DEMOLITION

1. Drawings showing the removal and disposal of hazardous materials. Design is based on the Hazards Abatement Design Criteria, the Hazardous Materials Survey Report and any additional testing deemed necessary by the Contractor.
2. Floor plans and other drawings with types, locations, and quantities of all hazardous materials to be removed and disposed of. Show sufficient detail to allow the abatement contractor to perform work without contamination of the site or exposure to personnel.
3. Specifications (supplemental to paragraph 3.5 below) – prepare draft of proposed specification sections using edited Corps of Engineers Guide Specifications (CEGS) SECTIONS 13280 Asbestos Abatement and 13281 Lead Hazard Control Activities, and other sections for hazardous materials not addressed under these two sections.

i. FIRE PROTECTION

1. Design Analysis: Provide a fire protection design analysis separate from all other disciplines. Prepare a comprehensive design analysis in full compliance with Military Handbook 1008C. The analysis shall include a description of the overall fire protection system proposed for the facility including types and arrangement of all systems and subsystems. Include descriptions of sprinklers, nozzles, foam generators, detection, control, foam concentrate, proportioning. Include descriptions of sprinkler types, spacing, limitations, etc. Include a detailed analysis of water supply system; compare system demand with available water supply. The analysis shall include an exterior hose stream demand of 1893 L/min. The analysis shall include hydraulic calculations using recognized fire protection software as well as a system sketch showing all pipes and nodes in the entire system. The sketch shall correspond to the system layout used on the drawings as well as in the hydraulic calculations. Identify all hydraulic reference points (nodes) in the piping system. Include elevation and pressure at each node an include k-factor and flow for each discharging node. The fire protection design analysis shall include catalog information for all items of equipment intended for use including by not limited to, fire pumps, jockey pumps, foam tanks, foam proportioners, foam nozzles, foam generators, foam concentrate valves, control valves, flow control valves and sprinklers.
2. Fire Suppression System Plans, which include water supply line sizing, equipment and riser layout, room by room hazard classification and respective design density and floor are coverage, identification of all flow zones and control valve switches (coordinated with electrical). Provide large-scale AFFF Equipment Room Floor Plan and stationary nozzle locations.
3. Fire Alarm System Plan showing panels, initiating devices, and indicating devices.

3.5 SPECIFICATIONS

Submit specifications Division 2 through Division 16 from CSI Specifications or COE Guide Specifications (CEGS). Where CEGS are used, Contractor shall follow guidance provided in ER 1110-345-700 Appendix D. 65% Specifications shall consist of Parts 1, 2 and 3 of each section and shall be inclusive of all building and site work elements.

3.6 INTERIOR DESIGN PACKAGE

a. SCOPE - The Contractor shall provide Building Related Interior Design (SID) as outlined in ER 1110-345-122 available from the Corps of Engineers “TECHINFO” web site (http://www.hnd.usace.army.mil/techinfo/). The design and design review shall be accomplished by, or in consultation with, professional interior designers and architects. The 65% submittal shall include product samples, color boards, plus any other media, which accurately describe the interior finishes and furnishings throughout.

b. COLOR BOARDS - The Contractor shall prepare color boards of materials proposed. Boards shall be of professional quality, in 8 ½” x 11” format on illustration board backing. Boards shall consist of actual samples and color chips. Materials that will be adjacent in their installed locations shall be adjacent on the board. Boards shall indicate proportion of areas where finishes will be applied (e.g., accent finish small relative to field finish). A key shall be provided on the back of each board relating colors and materials to manufacturers’ identification, contract finishes schedule, and installed location. Provide two copies of each board.

PART IV 95% DESIGN SUBMITTAL REQUIREMENTS

4.1 REVIEW COMMENTS

Incorporate all Government review comments from the 65% submittal review into the drawings and specifications. Prepare annotated (accepted/rejected, and action taken) Government review comments.

4.2 INDEPENDENT REVIEW CERTIFICATION

Signed letter of certification from independent reviewer for each design discipline stating that he/she has reviewed the 95% Submittal design documents for that discipline and that he/she agrees that the design is complete, correct, and in conformance with the requirements of the Task Order.

4.3 DD FORM 1354

The contractor shall fill in as much information as possible on the DD Form 1354, Transfer and Acceptance of Military Real Property dated February 1990 and attached at the end of this section. DD Form 1354 itemizes component costs for the construction of this project and shall be submitted within seven (7) days after construction completion.

4.4 DESIGN ANALYSIS

The 95% Design Analysis shall follow the format presented in Appendix B of ER 1110-345-700 available on the Corps of Engineers "Techinfo" web site (http://www.hnd.usace.army.mil/techinfo/) excluding part 6 "Exceptions to Appendix B Requirements". The contents shall include updated design calculations for all disciplines and other information as required and shall reflect the minimum requirements listed in this Task Order and the accepted Contractor's proposal.

4.5 DESIGN DOCUMENTS

a. Provide complete and coordinated construction documents showing all elements necessary for construction. Drawings for all submittals shall follow the format presented in Appendix C of ER 1110-345-700 for standard and definitive design drawings and, specifically, shall follow the Honolulu District Corps of Engineers CADD guidelines available upon request. Drawings shall be drawn in English units and metric (in parenthesis) using MicroStation Version 8 or the latest format, shall be complete and organized as outlined therein; such that any qualified contractor would be able to construct the facility without any additional assistance except for shop drawings or unforeseen conditions encountered during construction. In addition, the contents shall reflect the minimum requirements listed in the Task Order and the Contractor's proposal along with any subsequent items negotiated since award. Only minor comments are expected to be generated by the Government from the 95% review.

b. A substantial number of comments generated by the Government or comments indicating that constructabilty and/or compliance with the Task Order is not apparent in this submittal shall constitute grounds for the requirement of another, more complete, 95% design submittal.

c. Minimum Requirements by Discipline:

CIVIL

1. Field Screen Testing.
   i Sampling and Analysis Plan (SAP).
   ii Field Sampling Plan (FAP).
   iii Quality Assurance Program Plan (QAPP).
2. Demolition
   i. Demolition Work/Disposal Plan.
   ii. Dust Control Plan.
   iii. Schedule of proposed demolition work.
   iv. Temporary Erosion and Pollution Control Plan.
3. Site Design/Earthwork
   i Drawings: The drawings shall include all site plans and/or grading plans necessary to meet the stated requirements outlined in the Task Order and as listed in the 65% submittal requirements. All minimum dimensions shall be clearly delineated on the drawings. Provide sufficient detail to determine that site layout and site amenities meet the minimum Task Order requirements. Show proposed finish floor elevations, a minimum of two (2) section cuts for the building, site grading/drainage improvements and all proposed appurtenances.
4. Asphalt Paving/Concrete Paving.
   i. Drawings: The drawings shall designate all AC paved improvements on the site plan as well as concrete improvements such as walks, miscellaneous slabs and curbs & gutters.

LANDSCAPE

1. Drawings.
   i. Landscape Site Plans (match Civil drawing scale).
   ii. Planting Plan (if not included in Landscape Site Plan).
   iii. Details/Sections.
      1) Swale
      2) Berm

ARCHITECTURAL

1. General
   i. Code Analysis.
   ii. Abbreviations, Legends, Graphic Symbols.
   iii. Drawings.
      1) Building Plans (1:100 scale): floor plans, reflected ceiling plans, roof plan
      2) Mezzanine Plan (if applicable)
      3) Exterior Elevations (1:100 scale)

4) Building Sections (1:50 scale)
5) Wall Sections (1:10 or 1:5 scale)
6) Details (1:5 or 1:2.5 scale)
7) Bathroom/Latrine Plans (1:25 scale)
8) Interior Elevations (1:50 or 1:25 scale)
9) Finish/Door/Color Schedules
10) Door Types, Frame and Storefront Types, Window Types

STRUCTURAL

1. Drawings - shall be complete such that all materials, material layouts, connections, elevations and dimensions are clearly noted.

i Abbreviations, Structural Notes (Directly Related to this Project): Code, Soils Information, Design Live Loads, Material Specifics, Miscellaneous Information.
ii Plans (Scale – 1:100): Grid and Overall Dimensions, Specific Dimensions, Elevations, Section and Detail Cuts.
iii Foundation Plan: Footing - Type, Size, Reinforcing, Depth, Location; Slab on Grade - Thickness, Slopes, Drains, Reinforcing, Extent, Subgrade, Pits; Pilaster - Size, Reinforcing, Location; Column - Type, Size, Location.
iv Roof Framing Plan: Type, Size, Extent, Spacing of framing members.
v Foundation Sections/Details (Scale = 1:10).
vi Framing Details (Scale = 1:10).

MECHANICAL

1. Plumbing Drawings shall include all domestic water, rainwater, waste and vent piping, compressed air piping, and gas piping located in the building. All plumbing fixtures and equipment shall be clearly labeled and identified on the drawings. Provide a fixture connection schedule showing all plumbing fixtures and the required plumbing systems piping connection size. Provide details as required to fully depict plumbing systems and all building shell penetrations.
2. Air Conditioning Drawings shall include all piping systems located in the building. All thermostats and other equipment shall be clearly labeled and identified on the drawings. Equipment shall be located to insure proper maintenance access and removal with the required clear service area for major mechanical equipment. All piping 100 mm and over shall be shown as double line "true" size on 1:50 drawings and piping 200 mm and over shall be shown as double line "true" size on 1:100 drawings. Provide details as required to fully depict all air conditioning systems and building shell penetrations.
3. Ventilation System Drawings: Develop drawings listed in 65% submittal to 95% completion and add details as required to fully describe the intended design. The drawings shall

include all mechanical room ventilation and exhaust systems located in the building. All ventilation equipment shall be clearly labeled and identified on the drawings. Equipment shall be located to insure proper maintenance access and removal with the required clear service area for major mechanical equipment. All ductwork shall be shown as double line "true" size on the plans, building sections, and mechanical room. Provide details as required to fully depict all ventilation systems and all building shell penetrations.

ELECTRICAL

1. Drawings.
    i. Site Plans - Match Civil.
    ii. Building Plans (Scale 1:100 minimum) including:
        1) Lighting layouts, switching and controls
        2) Power receptacles and mechanical and other general power utilization equipment connections
        3) Circuiting showing numbers and sizes of wires and conduit, circuit designation. Typical minimum size and quantity of wires in conduit may be used
        4) Telephone, computer system outlets
        5) Distribution and lighting/appliance panels, contactors,
        and terminal boards/cabinets
2. Diagrams: One-line diagrams shall denote conductor quantities and sizes.
    i. Power one-line diagram including all panelboards, major
    equipment and metering, and grounding.
    ii. Telephone/data one-line diagram.
3. Schedules.
    i. Lighting Fixture Schedule with Lamp Types, Quantity, Voltage, Mounting, Power Requirements in kVa, Manufacturer and Catalog Number
    ii. Panelboard schedules with all circuits identified, connected loads, demand loads and short circuit ratings.
4. Details.
    i. Exterior Lighting pole bases.
    ii. Primary power line connection
    iii. Transformer.
    iv. Manholes (if required)
5. Minimum Calculations to be submitted:
    i. Service size in accordance with NEC requirements
    ii. Zonal Cavity Lumen Method Lighting Levels for Interior Spaces designated in the requirements.
    iii. Point by point lighting calculations for all exterior areas designated in the requirements.
    iv. Short circuit currents at distribution panels to lighting and appliance panelboards.

HAZARDOUS MATERIALS

1. Update previously submitted drawings showing the removal and disposal of hazardous materials. Design is based on the Hazards Abatement Design Criteria, the Hazardous Materials Survey Report and any additional testing deemed necessary by the Contractor.

2. Provide floor plans and other drawings with types, locations, and quantities of all hazardous materials to be removed and disposed of. Show sufficient detail to allow the abatement contractor to perform work without contamination of the site or exposure to personnel.

FIRE PROTECTION

1. Complete drawings including floor plans, diagrams, device locations, and panel drawings. Provide complete catalog data for all panels, detectors, devices, and electrical components.

2. Submit final drawings with detailed equipment room plans, floor plans, piping diagrams, and equipment lists. Drawings shall be signed by the certified designer. Provide final hydraulic calculations.

4.6 INTERIOR DESIGN PACKAGE

Update the 65% Interior Design Package with any additions or changes made since the 65% Submittal. Update color boards similarly, two (2) copies of each are required. If no changes occurred since the 65% Submittal, color photocopy format is acceptable.

4.7 SPECIFICATIONS

a. Develop Specifications Divisions 1 through 16 from CSI Format, Corps of Engineers Guide Specifications (CEGS), or SPECSINTACT. Where CEGS are used the Contractor shall follow guidance provided in ER 1110-345-700 Appendix D.

b. Catalog cuts organized by discipline and specification division shall be bound under separate cover as Volume 2 of the Specifications. Include M/E/P, Fire Protection items, and Architectural Elements such as: roofing assemblies, exterior materials, doors/hardware, windows, specialty items and equipment. Include Hazardous Materials Abatement Work Plan and all submittals required by the hazardous abatement specifications for review and approval.

4.8 DEMOLITION WORK PLAN

Develop and submit a decommissioning plan and schedule with the Government’s input on timeline activities.

4.9 SHOP DRAWING TRANSMITTAL REGISTER

Develop and submit a master list of all submittal items for review by the Government, organized by discipline and specification section. Include: product submittals for approval, shop drawings for approval, shop drawings for information only (FIO), and operations and maintenance (O&M) manuals. Catalog cuts organized by discipline and specification division shall be bound under separate cover as Volume 2 of the Specifications. Include M/E/P, Fire Protection items, and Architectural Elements such as: roofing assemblies, exterior materials, doors/hardware, windows, specialty items and equipment.

4.10 DEMOLITION WORK -

Develop and submit a decommissioning plan and schedule (to include hazardous materials removal) with the Government’s input on timeline activities.

PART V 100% DESIGN SUBMITTAL REQUIREMENTS

5.1 REVIEW COMMENTS

Incorporate all Government review comments from the 95% submittal review into the design analysis, drawings, and specifications. Prepare annotated (accepted/rejected, and action taken) 95% Submittal review comments. Provide annotated comments no later than five days following 95% review conference. Submit 100% design analysis, drawings, and specifications no later than 15 days following 95% review conference. Additional backcheck submittals may be required if all comments were not addressed adequately on the 100% submittal.

5.2 HAZARDOUS MATERIALS ABATEMENT WORK PLAN –

Demolition

Submit a complete hazardous materials abatement work plan and all submittals required by the hazardous materials specifications for review and approval prior to beginning demolition of facility.

--END OF SECTION--

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01312

QUALITY CONTROL SYSTEM (QCS)

SECTION 01312

QUALITY CONTROL SYSTEM (QCS)

PART 1 GENERAL

1.1 GENERAL

The Government will use the Resident Management System for Windows (RMS-W) to assist in its monitoring and administration of this contract. The Contractor shall use the Government-furnished Construction Contractor Module of RMS-Windows, referred to as QCS (QC for Quality Control), to record, maintain, and submit various information throughout the contract period. This joint Government-Contractor use of RMS-W and QCS will facilitate electronic exchange of information and overall management of the contract. QCS provides the means for the Contractor to input, track, and electronically share information with the Government in the following areas:

Administration
Finances
Quality Control
Submittal Monitoring
Scheduling
Import/Export of Data

1.1.1 Applicability

QCS shall be used during both the design and construction phases of the contract.

1.1.2 Correspondence and Electronic Communications

For ease and speed of communications, both Government and Contractor will, to the maximum extent feasible, exchange correspondence and other documents in electronic format. Correspondence, pay requests and other documents comprising the official contract record shall also be provided in paper format, with signatures and dates where necessary. Paper documents will govern, in the event of discrepancy with the electronic version.

1.1.3 Other Factors

Particular attention is directed to Contract Clause, "Schedules for Construction Contracts", Contract Clause, "Payments", Section 01320Q, "Project Schedule", Section 01330, SUBMITTAL PROCEDURES, and Section 01451Q, CONTRACTOR QUALITY CONTROL, which have a direct relationship to the reporting to be accomplished through QCS. Also, there is no separate payment for establishing and maintaining the QCS database; all costs associated therewith shall be included in the contract pricing for the work.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

ENGINEERING MANUALS (EM)

EM 385-1-1	U.S. Army Corps of Engineers Safety and Health Requirement Manual

1.3 QCS SOFTWARE

QCS is a Windows-based program that can be run on a stand-alone personal computer or on a network. The Government will make available the QCS software to the Contractor after award of the construction contract. Prior to the Pre-Construction Conference, the Contractor shall be responsible to download, install and use the latest version of the QCS software from the Government's RMS Internet Website:

(http://winrms.usace.army.mil/contractor's.htm)

Upon specific justification and request by the Contractor, the Government can provide QCS on 3-1/2" high-density diskettes or CD-ROM. Any program updates of QCS will be made available to the Contractor via the Government RMS Website as they become available.

1.4 SYSTEM REQUIREMENTS

The following listed hardware and software is the minimum system configuration that the Contractor shall have to run QCS:

Hardware

IBM-compatible PC with 200 MHz Pentium or higher processor

32+ MB RAM

4 GB hard drive disk space for sole use by the QCS system

3 1/2 inch high-density floppy drive

Compact disk (CD) Reader

Color monitor

Laser printer compatible with HP LaserJet III or better, with minimum 4 MB installed memory.

Connection to the Internet, minimum 28 BPS

Software

MS Windows 95 or newer version operating system (MS Windows NT 4.0 or newer is recommended)

Word Processing software compatible with MS Word 97 or newer

Internet browser

The Contractor's computer system shall be protected by virus protection software that is regularly upgraded with all issued manufacturer's updates throughout the life of the contract.

Electronic mail (E-mail) compatible with MS Outlook

1.5 RELATED INFORMATION

1.5.1 QCS User Guide

After contract award, the Contractor shall download instructions for the installation and use of QCS from the Government RMS Internet Website. In case of justifiable difficulties, the Government will provide the Contractor with a CD-ROM containing these instructions.

1.5.2 Contractor Quality Control(CQC) Training

The use of QCS will be discussed with the Contractor's QC System Manager in the course entitled, "Construction Quality Management For Contractors" (Section 01451).

1.6 CONTRACT DATABASE

Prior to the pre-construction conference, the Government will provide the Contractor with basic contract award data to use for QCS. The Government will provide data updates to the Contractor as needed, generally by files attached to E-mail. These updates will generally consist of submittal reviews, correspondence status, QA comments, and other administrative and QA data.

1.7 DATABASE MAINTENANCE

The Contracting Officer the Contractor shall establish, maintain, and update data for the contract in the QCS database at the Contractor's site office. Data updates to the Government shall be submitted by E-mail with file attachments, e.g., daily reports, schedule updates, payment requests. If permitted by the Contracting Officer, a data diskette or CD-ROM may be used instead of E-mail (see Paragraph DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM). The QCS database typically shall include current data on the following items:

1.7.1 Administration

1.7.1.1 Contractor Information

The database shall contain the Contractor's name, address, telephone numbers, management staff, and other required items. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver Contractor administrative data in electronic format via E-mail.

1.7.1.2 Subcontractor Information

The database shall contain the name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor must be listed separately for each trade to be performed. Each subcontractor/trade shall be assigned a unique Responsibility Code, provided in QCS. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver subcontractor administrative data in electronic format via E-mail.

1.7.1.3 Correspondence

All Contractor correspondence to the Government shall be identified with a serial number. Correspondence initiated by the Contractor's site office

shall be prefixed with "S". Letters initiated by the Contractor's home (main) office shall be prefixed with "H". Letters shall be numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to the Contractor will be prefixed with "C".

1.7.1.4 Equipment

The Contractor's QCS database shall contain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates.

1.7.1.5 EM 385-1-1, Corps of Engineers Safety Manual and RMS Linkage

Upon request, the Contractor can obtain a copy of the current version of the Safety Manual, EM 385-1-1, on CD. Data on the CD will be accessible through QCS, or in stand-alone mode.

1.7.1.6 Management Reporting

QCS includes a number of reports that Contractor management can use to track the status of the project. The value of these reports is reflective of the quality of the data input, and is maintained in the various sections of QCS. Among these reports are: Progress Payment Request worksheet, QA/QC comments, Submittal Register Status, Three-Phase Inspection checklists.

1.7.2 Finances

1.7.2.1 Pay Activity Data

The QCS database shall include a list of pay activities that the Contractor shall develop in conjunction with the construction schedule. The sum of all pay activities shall be equal to the total contract amount, including modifications. Pay activities shall be grouped by the Contract Line Item Number (CLIN), and the sum of the activities shall equal the amount of each CLIN. The total of all CLINs equals the Contract amount.

1.7.2.2 Payment Requests

All progress payment requests shall be prepared using QCS. The Contractor shall complete the payment request worksheet and include it with the payment request. The work completed under the contract, measured as percent or as specific quantities, shall be updated at least monthly. After the update, the Contractor shall generate a payment request report using QCS. The Contractor shall submit the payment requests with supporting data by E-mail with file attachment(s). If permitted by the Contracting Officer, a data diskette may be used instead of E-mail. A signed paper copy of the approved payment request is also required, which shall govern in the event of discrepancy with the electronic version.

1.7.3 Quality Control (QC)

QCS provides a means to track implementation of the 3-phase QC Control System, prepare daily reports, identify and track deficiencies, document progress of work, and support other contractor QC requirements. The Contractor shall maintain this data on a daily basis. Entered data will automatically output to the QCS generated daily report. The Contractor shall provide the Government a Contractor Quality Control (CQC) Plan within the time required in Section 01451Q, CONTRACTOR QUALITY CONTROL. Within

seven calendar days of Government acceptance, the Contractor shall submit a data diskette or CD-ROM reflecting the information contained in the accepted CQC Plan: schedule, pay activities, features of work, submittal register, QC requirements, and equipment list.

1.7.3.1 Daily Contractor Quality Control (CQC) Reports.

QCS includes the means to produce the Daily CQC Report. The Contractor may use other formats to record basic QC data. However, the Daily CQC Report generated by QCS shall be the Contractor's official report. Data from any supplemental reports by the Contractor shall be summarized and consolidated onto the QCS-generated Daily CQC Report. Daily CQC Reports shall be submitted as required by Section 01451Q, CONTRACTOR QUALITY CONTROL. Reports shall be submitted electronically to the Government using E-mail or diskette within 24 hours after the date covered by the report. Use of either mode of submittal shall be coordinated with the government representative. The Contractor shall also provide the Government a signed, printed copy of the daily CQC report.

1.7.3.2 Deficiency Tracking.

The Contractor shall use QCS to track deficiencies. Deficiencies identified by the Contractor will be numerically tracked using QC punch list items. The contractor shall maintain a current log of its QC punch list items in the QCS database. The Government will log the deficiencies it has identified using its QA punch list. The Government's QA punch list items will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of both QC and QA punch list items.

1.7.3.3 Three-Phase Control Meetings

The Contractor shall maintain scheduled and actual dates and times of preparatory and initial control meetings in QCS.

1.7.3.4 Accident/Safety Tracking.

The Government will issue safety comments, directions, or guidance whenever safety deficiencies are observed. The Government's safety comments will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of the safety comments. In addition, the Contractor shall utilize QCS to advise the Government of any accidents occurring on the jobsite. This brief supplemental entry is not to be considered as a substitute for completion of mandatory reports, e.g., ENG Form 3394 and OSHA Form 200.

1.7.3.5 Features of Work

The Contractor shall include a complete list of the features of work in the QCS database. A feature of work may be associated with multiple pay activities. However, each pay activity (see subparagraph "Pay Activity Data" of paragraph "Finances") will only be linked to a single feature of work.

1.7.3.6 QC Requirements

The Contractor shall develop and maintain a complete list of QC testing, transferred and installed property, and user training requirements in QCS. The Contractor shall update all data on these QC requirements as work

progresses, and shall promptly provide this information to the Government via QCS.

1.7.4 Submittal Management

The Government will provide the initial submittal register, ENG Form 4288, SUBMITTAL REGISTER, in electronic format. Thereafter, the Contractor shall maintain a complete list of all submittals, including completion of all data columns as described in Section 01330, SUBMITTAL PROCEDURES. Dates on which submittals are received and returned by the Government will be included in its export file to the Contractor. The Contractor shall use QCS to track and transmit all submittals. ENG Form 4025, submittal transmittal form, and the submittal register update, ENG Form 4288, shall be produced using QCS. RMS-W will be used to update, store and exchange submittal registers and transmittals, but will not be used for storage of actual submittals.

1.7.5 Schedule

The Contractor shall develop a construction schedule consisting of pay activities, in accordance with Section 01320Q, PROJECT SCHEDULE, as applicable. This schedule shall be input and maintained in the QCS database either manually or by using the Standard Data Exchange Format (SDEF) (see Section 01320Q PROJECT SCHEDULE). The updated schedule data shall be included with each pay request submitted by the Contractor.

1.7.6 Import/Export of Data

QCS includes the ability to export Contractor data to the Government and to import submittal register and other Government-provided data, and schedule data using SDEF.

1.8 IMPLEMENTATION

Contractor use of QCS as described in the preceding paragraphs is mandatory. The Contractor shall ensure that sufficient resources are available to maintain its QCS database, and to provide the Government with regular database updates. QCS shall be an integral part of the Contractor's management of quality control.

1.9 DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM

The Government-preferred method for Contractor's submission of updates, payment requests, correspondence and other data is by E-mail with file attachment(s). For locations where this is not feasible, the Contracting Officer may permit use of computer diskettes or CD-ROM for data transfer. Data on the disks or CDs shall be exported using the QCS built-in export function. If used, diskettes and CD-ROMs will be submitted in accordance with the following:

1.9.1 File Medium

The Contractor shall submit required data on 3-1/2" double-sided high-density diskettes formatted to hold 1.44 MB of data, capable of running under Microsoft Windows 95 or newer. Alternatively, CD-ROMs may be used. They shall conform to industry standards used in the United States. All data shall be provided in English.

1.9.2 Disk or CD-ROM Labels

The Contractor shall affix a permanent exterior label to each diskette and CD-ROM submitted. The label shall indicate in English, the QCS file name, full contract number, project name, project location, data date, name and telephone number of person responsible for the data.

1.9.3 File Names

The Government will provide the file names to be used by the Contractor with the QCS software.

1.10 MONTHLY COORDINATION MEETING

The Contractor shall update the QCS database each workday. At least monthly, the Contractor shall generate and submit an export file to the Government with schedule update and progress payment request. As required in Contract Clause "Payments", at least one week prior to submittal, the contractor shall meet with the Government representative to review the planned progress payment data submission for errors and omissions. The contractor shall make all required corrections prior to Government acceptance of the export file and progress payment request. Payment requests accompanied by incomplete or incorrect data submittals will be returned. The Government will not process progress payments until an acceptable QCS export file is received.

1.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the requirements of this specification. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01320Q

PROJECT SCHEDULE

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SECTION 01320Q

PROJECT SCHEDULE

PART 1 GENERAL

1.1 DEFINITIONS

The Project Schedule shall be contract comprehensive, and shall track the progress of all open task orders in a single network analysis system. The Project Schedule shall be prepared and maintained in accordance with the provisions of this section.

A Construction Schedule shall be prepared and maintained for each task order. Except as noted below, construction schedules shall be in the form of a progress chart using ENG Form 2454, Construction Progress Chart. Construction Progress Charts shall be in accordance with the provisions of FAR 52.246-15, Schedules for Construction Contracts.

1.2 APPLICABILITY

The requirements of this section apply to the contract Project Schedule and the construction schedules of all task orders valued at $100,000 or more, and with a duration greater than 120 calendar days, unless otherwise noted in the task order. Task orders that do not meet these minimums may use Progress Charts.

All references to Project Schedule in this section shall mean the same as task order construction schedule for those task orders that exceed the minimum criteria stated above.

1.3 LEVEL OF DETAIL

The contract Project Schedule shall minimally include an activity for each feature of work in each task order. The activities in each task order shall be banded.

1.4 TASK ORDER DEPENDENCIES

Where a task order activity(ies) is/are impacted by an activity(ies) from another task order, this interrelationship shall be indicated in the contract Project Schedule.

1.5 ELECTRONIC SCHEDULE REQUIREMENT

The Project Schedule to be prepared by the Contractor shall be electronically prepared using software capable of generating a data file in the Standard Data Exchange Format (SDEF). The Project Schedule shall consist of a network analysis system as described below. In preparing this system the scheduling of Construction is the sole responsibility of the contractor. The requirement for the system is included to assure adequate planning in the execution of the work and to assist the Contracting Officer in appraising the reasonableness of the proposed schedule and evaluating progress of the work for the purposes of payment.

1.6 SUBMITTALS

Government acceptance is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Preliminary Project Schedule; G.
Initial Project Schedule; G.
Periodic Schedule Updates; G.

Four copies of the schedules showing codes, values, categories, numbers, items, etc., as required.

Periodic schedule updates of both project and construction schedules shall be submitted monthly, including schedules prepared on ENG Form 2454.

SD-06 Test Reports

Narrative Report.
Schedule Reports.

Four copies of the reports showing numbers, descriptions, dates, float, starts, finishes, durations, sequences, etc., as required.

SD-07 Certificates

Qualifications; G.

Documentation showing qualifications of personnel preparing schedule reports.

1.7 QUALIFICATIONS

The Contractor shall designate an authorized representative who shall be responsible for the preparation of all required project schedule reports. This person shall have previously created and reviewed computerized schedules using the software selected by the Contractor. Qualifications of this individual shall be submitted to the Contracting Officer for review with the Preliminary Project Schedule submission.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL

Pursuant to the Contract Clause, SCHEDULE FOR CONSTRUCTION CONTRACTS, a Project Schedule as described below shall be prepared. The scheduling of construction shall be the responsibility of the Contractor. Contractor management personnel shall actively participate in its development. Subcontractors and suppliers working on the project shall also contribute in developing and maintaining an accurate Project Schedule. The accepted Project Schedule shall be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis of all progress payments.

3.2 BASIS FOR PAYMENT

The schedule shall be the basis for measuring Contractor progress. Lack of an accepted schedule or scheduling personnel shall result in an inability of the Contracting Officer to evaluate Contractor progress for the purposes of payment. Failure of the Contractor to provide all information, as specified below, shall result in the disapproval of the entire Project Schedule submission and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes. In the case where Project Schedule revisions have been directed by the Contracting Officer and those revisions have not been included in the Project Schedule, then the Contracting Officer may hold retainage up to the maximum allowed by contract, each payment period, until revisions to the Project Schedule have been made.

3.3 ELECTRONIC PROJECT SCHEDULE

The computer software system utilized by the Contractor to produce the Project Schedule shall be capable of providing all requirements of this specification. Failure of the Contractor to meet the requirements of this specification shall result in the disapproval of the schedule. Manually generated schedules will not be accepted.

The systems noted below are capable of generating a file in the Standard Data Exchange Format (SDEF). All electronic data submittals shall be in SDEF. SDEF information is available from the Contracting Officer.

Vendor/System with SDEF support:

Primavera Systems PRIMAVERA PROJECT PLANNER (P3)

3.3.1 Use of the Critical Path Method

The Critical Path Method (CPM) of network calculation shall be used to generate the Project Schedule. The Contractor shall provide the Project Schedule in either the Precedence Diagram Method (PDM) or the Arrow Diagram Method (ADM).

3.3.2 Level of Detail Required

With the exception of the preliminary schedule submission, the Project Schedule shall include an appropriate level of detail. Failure to develop or update the Project Schedule or provide data to the Contracting Officer at the appropriate level of detail, as specified by the Contracting Officer, shall result in the disapproval of the schedule. The Contracting Officer will use, but is not limited to, the following conditions to determine the appropriate level of detail to be used in the Project Schedule.

3.3.2.1 Activity Durations

Contractor submissions shall follow the direction of the Contracting Officer regarding reasonable activity durations. Reasonable durations are those that allow the progress of activities to be accurately determined between payment periods (usually less than 2 percent of all non-procurement activities' Original Durations shall be greater than 20 days).

3.3.2.2 Design and Permit Activities (For Design Build Task Orders)

The Contractor shall integrate design and permitting activities, including necessary conferences and follow-up actions and design package submission dates into the schedule. The design schedule showing the sequence of events involved in carrying out the design tasks within the specific contract period shall be included in the project schedule. The design schedule should be at a detailed level of scheduling sufficient to identify all major tasks including those that control the flow of work. The design schedule shall include review and correction periods associated with each item. This should be a forward planning as well as a project-monitoring tool. The schedule shall reflect calendar days and not specific dates for each activity. If the design schedule is changed, the Contractor shall submit a revised schedule reflecting the change within seven calendar days of the change.

3.3.2.3 Procurement Activities

Tasks related to the procurement of long lead materials or equipment shall be included as separate activities in the project schedule. Long lead materials and equipment are those materials that have a procurement cycle of over 90 days. Examples of procurement process activities include, but are not limited to: submittals, approvals, procurement, fabrication, delivery, installation, start-up, and testing.

3.3.2.4 Government Activities

Government and other agency activities that could impact progress shall be shown. These activities include, but are not limited to: approvals, inspections, utility tie-in, Government Furnished Equipment (GFE) and notice to proceed for phasing requirements.

3.3.2.5 Responsibility

All activities shall be identified in the project schedule by the party responsible to perform the work. Responsibility includes, but is not limited to, the subcontracting firm, contractor work force, or government agency performing a given task. The responsible party for each activity shall be identified by the Responsibility Code.

3.3.2.6 Work Areas

All activities shall be identified in the project schedule by the work area in which the activity occurs. Activities shall not be allowed to cover more than one work area. The work area of each activity shall be identified by the Work Area Code.

3.3.2.7 Modification or Claim Number

Any activity that is added or changed by contract modification or used to justify claimed time shall be identified by a mod or claim code that changed the activity. Activities shall not belong to more than one modification or claim item. The modification or claim number of each activity shall be identified by the Mod or Claim Number.

3.3.2.8 Bid Item

All activities shall be identified in the project schedule by the Contract/Task Order Line Item to which the activity belongs. An activity

shall not contain work in more than one line item. The line item for each appropriate activity shall be identified by the Bid Item Code.

3.3.2.9 Feature of Work

All activities shall be identified in the project schedule according to the feature of work to which the activity belongs. Feature of work refers, but is not limited to a work breakdown structure for the project. The feature of work for each activity shall be identified by the Feature of Work Code.

3.3.3 Scheduled Project Completion

The schedule interval shall extend from notice-to-proceed to the contract completion date.

3.3.3.1 Project Start Date

The schedule shall start no earlier than the date that the Notice to Proceed (NTP) was acknowledged. The Contractor shall include as the first activity in the project schedule an activity called "Start Project". The "Start Project" activity shall have: an "ES" constraint, a constraint date equal to the date that the NTP was acknowledged, and a zero day duration.

3.3.3.2 Constraint of Last Activity

Completion of the last activity in the schedule shall be constrained by the contract completion date. Calculation on project updates shall be such that if the early finish of the last activity falls after the contract completion date, then the float calculation shall reflect a negative float on the critical path. The Contractor shall include as the last activity in the project schedule an activity called "End Project". The "End Project" activity shall have: an "LF" constraint, a constraint date equal to the completion date for the project, and a zero day duration.

3.3.3.3 Early Project Completion

In the event the project schedule shows completion of the project prior to the contract completion date, the Contractor shall identify those activities that have been accelerated and/or those activities that are scheduled in parallel to support the Contractor's "early" completion. Contractor shall specifically address each of the activities noted at every project schedule update period to assist the Contracting Officer in evaluating the Contractor's ability to actually complete prior to the contract period.

3.3.4 Interim Completion Dates

Contractually specified interim completion dates shall also be constrained to show negative float if the early finish date of the last activity in that phase falls after the interim completion date. The required completion date of each task order shall be identified as interim completion dates on the Project Schedule.

3.3.5 Default Progress Data Disallowed

Actual Start and Finish dates shall not be automatically updated by default mechanisms that may be included in CPM scheduling software systems. Actual Start and Finish dates on the CPM schedule shall match those dates provided from Contractor Quality Control Reports. Failure of the Contractor to

document the Actual Start and Finish dates on the Daily Quality Control report for every in-progress or completed activity and ensure that the data contained on the Daily Quality Control reports is the sole basis for schedule updating shall result in the disapproval of the Contractor's schedule and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes.

3.3.6 Out-of-Sequence Progress

Activities that have posted progress without predecessors being completed (Out-of-Sequence Progress) will be allowed only on a case-by-case acceptance of the Contracting Officer. The Contracting Officer may direct that changes in schedule logic be made to correct any or all out-of-sequence work.

3.3.7 Extended Non-Work Periods

Designation of Holidays to account for non-work periods of over 5 days will not be allowed. Non-work periods of over 5 days shall be identified by addition of activities that represent the delays. Modifications to the logic of the project schedule shall be made to link those activities that may have been impacted by the delays to the newly added delay activities.

3.3.8 Negative Lags

Lag durations contained in the project schedule shall not have a negative value.

3.4 PROJECT SCHEDULE SUBMISSIONS

The Contractor shall provide the submissions as described below. The data disk, reports, and network diagrams required for each submission are contained in paragraph SUBMISSION REQUIREMENTS.

3.4.1 Preliminary Project Schedule Submission

The Preliminary Project Schedule, defining the Contractor's planned operations for the first 90 calendar days shall be submitted for approval within 20 calendar days after Notice to Proceed is acknowledged. The accepted preliminary schedule shall be used for payment purposes not to exceed 90 calendar days after Notice to Proceed.

3.4.2 Initial Project Schedule Submission

The Initial Project Schedule shall be submitted for acceptance within 60 calendar days after Notice to Proceed. The schedule shall provide a reasonable sequence of activities, which represent work through the entire project and shall be at a reasonable level of detail.

3.4.3 Periodic Schedule Updates

Based on the result of progress meetings, specified in "Periodic Progress Meetings," the Contractor shall submit periodic schedule updates. These submissions shall enable the Contracting Officer or to assess Contractor's progress. If the Contractor fails or refuses to furnish the information and project schedule data, which in the judgment of the Contracting Officer or authorized representative, is necessary for verifying the contractor's progress, the Contractor shall be deemed not to have provided an estimate upon which progress payment may be made.

3.4.4 Standard Activity Coding Dictionary

The Contractor shall submit, with the Initial Project Schedule, a coding scheme that shall be used throughout the project for all activity codes contained in the schedule. The coding scheme submitted shall list the values for each activity code category and translate those values into project specific designations. For example, a Responsibility Code Value, "ELE", may be identified as "Electrical Subcontractor." Activity code values shall represent the same information throughout the duration of the contract. Once accepted with the Initial Project Schedule submission, changes to the activity coding scheme must be accepted by the Contracting Officer.

3.5 SUBMISSION REQUIREMENTS

The following items shall be submitted by the Contractor for the initial submission, and every periodic project schedule update throughout the life of the project:

3.5.1 Data Disks

Two data disks or two sets of data disks containing the project schedule shall be provided. Data on the disks shall be in the Standard Data Exchange Format (SDEF), in accordance with ER-1-1-11, PROGRESS, SCHEDULES, AND NETWORK ANALYSIS SYSTEMS, Appendix A, Standard Data Exchange Format Specification (attached at the end of this Project Schedule specification.

3.5.1.1 File Medium

Required data shall be submitted on 3.5-inch disks, formatted to hold 1.44 MB of data, under the MS-Windows operating system.

3.5.1.2 Disk Label

A permanent exterior label shall be affixed to each disk submitted. The label shall indicate the type of schedule (Initial, Update, or Change), full contract number, project name, project location, data date, name and telephone number or person responsible for the schedule, and the operating system and version used to format the disk.

3.5.1.3 File Name

Each file submitted shall have a name related to either the schedule data date, project name, or contract number. The Contractor shall develop a naming convention that will ensure that the names of the files submitted are unique. The Contractor shall submit the file naming convention to the Contracting Officer for approval.

3.5.2 Narrative Report

A Narrative Report shall be provided with each update of the project schedule. This report shall be provided as the basis of the Contractor's progress payment request. The Narrative Report shall include: a description of activities along the critical path(s), a description of current and anticipated problem areas or delaying factors and their impact, and an explanation of corrective actions taken.

3.5.3 Accepted Changes Verification

Only project schedule changes that have been previously accepted by the Contracting Officer shall be included in the schedule submission. The Narrative Report shall specifically reference, on an activity by activity basis, all changes made since the previous period and relate each change to documented, accepted schedule changes.

3.5.4 Schedule Reports

The format for each activity for the schedule reports listed below shall contain: Activity Numbers, Activity Description, Original Duration, Remaining Duration, Early Start Date, Early Finish Date, Late Start Date, Late Finish Date, Total Float. Actual Start and Actual Finish Dates shall be printed for those activities in progress or completed.

3.5.4.1 Activity Report

A list of all activities sorted according to activity number and then sorted according to Early Start Date. For completed activities the Actual Start Date shall be used as the secondary sort.

3.5.4.2 Logic Report

A list of Preceding and Succeeding activities for every activity in ascending order by activity number and then sorted according to Early Start Date. For completed activities the Actual Start Date shall be used as the secondary sort.

3.5.4.3 Total Float Report

A list of all activities sorted in ascending order of total float. Activities that have the same amount of total float shall be listed in ascending order of Early Start Dates.

3.5.4.4 Earnings Report

A compilation of the Contractor's Total Earnings on the project from the Notice to Proceed until the most recent Monthly Progress Meeting. This report shall reflect the Earnings of specific activities based on the agreements made in the field and approved between the Contractor and Contracting Officer at the most recent Monthly Progress Meeting. Provided that the Contractor has provided a complete schedule update, this report shall serve as the basis of determining Contractor Payment. Activities shall be grouped by bid item and sorted by activity numbers. This report shall: sum all activities in a bid item and provide a bid item percent; and complete and sum all bid items to provide a total project percent complete. The printed report shall contain, for each activity: Activity Number, Activity Description, Original Budgeted Amount, Total Quantity, Quantity to Date, Percent Complete (based on cost), Earnings to Date.

3.5.5 Network Diagram

The network diagram shall be required on the initial schedule submission, on monthly schedule update submissions, whenever any logic changes have occurred, to include addition or deletion of activities due to modifications to the task order scope, or issuance of new task orders. The network diagram shall depict and display the order and interdependence of activities and the sequence in which the work is to be accomplished. The activity or event number, description, duration, and estimated earned value

shall be shown on the diagram. The Contracting Officer will use, but is not limited to, the following conditions to review compliance with this paragraph:

3.5.5.1 Continuous Flow

Diagrams shall show a continuous flow from left to right with no arrows from right to left. The activity or event number, description, duration, and estimated earned value shall be shown on the diagram.

3.5.5.2 Project Milestone Dates

Dates shall be shown on the diagram for start of project, any contract required interim completion dates, and contract completion dates.

3.5.5.3 Critical Path

The critical path shall be clearly shown.

3.5.5.4 Banding

Activities shall be grouped to assist in the understanding of the activity sequence. Typically, this flow will group activities by work area and/or responsibility.

3.5.5.5 S-Curves

A graph of anticipated earnings (S-Curves) showing cumulative for the duration of the project. The vertical scale shall show earnings/percent complete from 0%-100%. The horizontal scale shall be a time scale showing the calendar months of the project. Three curves shall be plotted on the same graph; the earnings/percent complete based on early finish dates; the earnings/percent complete based on late finish dates; the actual earnings/percent complete to date.

3.5.5.6 Bar Chart

A bar chart covering the previous month's activities and progress, and the planned activities over 3 months projected into the future. The chart shall also include actual and anticipated earnings.

3.6 PERIODIC PROGRESS MEETINGS

Progress meetings to discuss payment shall include a monthly onsite meeting or other regular intervals mutually agreed to at the preconstruction conference. During this meeting the Contractor shall describe, on an activity by activity basis, all proposed revisions and adjustments to the project schedule required to reflect the current status of the project. The Contracting Officer will accept activity progress, proposed revisions, and adjustments as appropriate.

3.6.1 Meeting Attendance

The Contractor's Project Manager and Scheduler shall attend the regular progress meeting.

3.6.2 Update Submission Following Progress Meeting

A complete update of the project schedule containing all accepted progress,

revisions, and adjustments, based on the regular progress meeting, shall be submitted not later than 4 working days after the monthly progress meeting.

3.6.3 Progress Meeting Contents

Update information, including Actual Start Dates, Actual Finish Dates, Remaining Durations, and Cost-to-Date shall be subject to the approval of the Contracting Officer. The following is a minimum set of items that the Contractor shall address, on an activity by activity basis, during each progress meeting.

3.6.3.1 Start and Finish Dates

The Actual Start and Actual Finish dates for each activity currently in-progress or completed activities.

3.6.3.2 Time Completion

The estimated Remaining Duration for each activity in-progress. Time-based progress calculations must be based on Remaining Duration for each activity.

3.6.3.3 Cost Completion

The earnings for each activity started. Payment will be based on earnings for each in-progress or completed activity. Payment for individual activities will not be made for work that contains quality defects. A portion of the overall project amount may be retained based on delays of activities.

3.6.3.4 Logic Changes

All logic changes pertaining to Notice to Proceed on change orders, change orders to be incorporated into the schedule, contractor proposed changes in work sequence, corrections to schedule logic for out-of-sequence progress, lag durations, issuance of task orders, and other changes that have been made pursuant to contract provisions shall be specifically identified and discussed.

3.6.3.5 Other Changes

Other changes required due to delays in completion of any activity or group of activities include: 1) delays beyond the Contractor's control, such as strikes and unusual weather. 2) delays encountered due to submittals, Government Activities, deliveries or work stoppages which make re-planning the work necessary, and 3) a schedule which does not represent the actual prosecution and progress of the work.

3.7 REQUESTS FOR TIME EXTENSIONS

In the event the Contractor requests an extension of the task order completion date, he shall furnish such justification, project schedule data and supporting evidence as the Contracting Officer may deem necessary for a determination as to whether or not the Contractor is entitled to an extension of time under the provisions of the contract. Submission of proof of delay, based on revised activity logic, duration, and costs (updated to the specific date that the delay occurred) is obligatory to any acceptance.

3.7.1 Justification of Delay

The project schedule shall clearly display that the Contractor has used, in full, all the float time available for the work involved with this request. The Contracting Officer's determination as to the number of allowable days of task order extension shall be based upon the project schedule updates in effect for the time period in question, and other factual information. Actual delays that are found to be caused by the Contractor's own actions, which result in the extension of the schedule, will not be a cause for a time extension to the task order completion date.

3.7.2 Submission Requirements

The Contractor shall submit a justification for each request for a change in the task order completion date of under 2 weeks based upon the most recent schedule update at the time of the Notice to Proceed or constructive direction issued for the change. Such a request shall be in accordance with the requirements of other appropriate Contract Clauses and shall include, as a minimum:

a. A list of affected activities, with their associated project schedule activity number.

b. A brief explanation of the causes of the change.

c. An analysis of the overall impact of the changes proposed.

d. A sub-network of the affected area.

Activities impacted in each justification for change shall be identified by a unique activity code contained in the required data file.

3.7.3 Additional Submission Requirements

For any requested time extension of over 2 weeks, the Contracting Officer may request an interim update with revised activities for a specific change request. The Contractor shall provide this disk within 4 days of the Contracting Officer's request.

3.8 DIRECTED CHANGES

If Notice to Proceed (NTP) is issued for changes prior to settlement of price and/or time, the Contractor shall submit proposed schedule revisions to the Contracting Officer within 2 weeks of the NTP being issued. The proposed revisions to the schedule will be accepted by the Contracting Officer prior to inclusion of those changes within the project schedule. If the Contractor fails to submit the proposed revisions, the Contracting Officer may furnish the Contractor suggested revisions to the project schedule. The Contractor shall include these revisions in the project schedule until revisions are submitted, and final changes and impacts have been negotiated. If the Contractor has any objections to the revisions furnished by the Contracting Officer, the Contractor shall advise the Contracting Officer within 2 weeks of receipt of the revisions. Regardless of the objections, the Contractor shall continue to update the schedule with the Contracting Officer's revisions until a mutual agreement in the revisions is reached. If the Contractor fails to submit alternative revisions within 2 weeks of receipt of the Contracting Officer's proposed revisions, the Contractor will be deemed to have concurred with the Contracting Officer's proposed revisions. The proposed revisions will then be the basis for an equitable adjustment for performance of the work.

3.9 OWNERSHIP OF FLOAT

Float available in the schedule, at any time, shall not be considered for the exclusive use of either the Government or the Contractor.

-- End of Section --

STANDARD DATA EXCHANGE FORMAT SPECIFICATION

PART 1- GENERAL

1. Application of This Provision: The Standard Data Exchange Format (SDEF) provides a non-proprietary protocol to exchange project planning and progress data between scheduling systems.

2. File Type and Format: The data file shall consist of a 132 character, freed format, "ASCII" file. Text shall be left-justified and numbers shall be right-justified in each field. Data records must conform, exactly, to the sequence, column position, maximum length, mandatory values, and field definitions described below to comply with the SDEF. Unless specifically stated, all numbers shall be whole numbers. Fields containing numbers shall not be zero filled. All data columns shall be separated by a single blank column. The file shall not contain blank lines.

3. Usage Notes: Where appropriate, notes regarding proper usage of systems to support the SDEF have been included in brackets ([ ]). These notes are included to assist users in creating SDEF-compatible files, given the variety of software systems that support the SDEF.

4. Recommended Systems: Several systems have been tested to determine the accuracy of importing and exporting SDEF files. For information on the current list of recommended systems, please contact Mr. Stan Green at HQUSACE, (202) 761-0206. Although the currently listed system have been tested other systems may also be acceptable provided those systems correctly import and export SDEF files.

5. SDEF Checker Program: A program that checks whether a file meets the SDEF is available free of charge. A copy of this program may be obtained by written request to: U.S. Army Corps of Engineers, ATTN: Mr. Bill East (CECER-FFA), P.O. Box 9005, Champaign, IL 61826-90005. A description of the SDEF Checker is also available on the Internet and CivilNet.

PART 2- SDEF SPECIFICATION

6. SDEF Organization: The SDEF shall consist of the following records provided in the exact sequence shown below:

Paragraph Reference	Record Description	Remarks
6.a	Volume Record	Mandatory First Line of File
6.b	Project Record	Mandatory Second Line of File
6.c	Calendar Record(s)	Mandatory One Record Minimum
6.d	Holiday Record(s)	Mandatory if Holidays Used
6.e	Activity Record(s)	Mandatory Records
6.f	Precedence Record(s)	Mandatory for Precedence
6.g	Unit Cost Record(s)	Mandatory for Unit Costs
6.h	Progress Record(s)	Mandatory Records
6.i	File End Record	Mandatory Last Line of Disk/File

6.a. Volume Record: The Volume Record shall be used to control the transfer of data that may not fit on a single disk. The first line in every file used to store SDEF data shall be the Volume Record. The Volume Record shall sequentially identify the number of the data transfer disk(s). The Volume Record shall have the following format:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1 - 4	4	VOLM	Fixed	Filled
DISK NUMBER	6 - 7	2	√	Number	Right Justified

6.a.(l) The RECORD IDENTIFIER is the first four characters of this record. The required value for this field shall be "VOLM". The VOLM record must appear on the first line of the SDEF data file.

6.a.(2) The DISK NUMBER field shall identify the number of the data disk used to store the data exchange information. If all data may be contained on a single disk, this field shall contain the value of "l". If more disks are required, then the second disk shall contain the value "2", the third disk shall be designated with a "3", and so on. Identifcation of the last data disk is accomplished in the Reject End Record.

6.b. Project Record: The Project Identifier Record shall contain general project information. Because more than one SDEF file may be required for data transfer between large projects, the PROJ record shall be the second line of the first SDEF file transferred. The PROJ record shall contain information in the following format:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1- 4	4	PROJ	Fixed	Filled
DATA DATE	6- 12	7	√	ddmmmyy	Filled
PROJECT IDENTIFIER	14-17	4	√	Alpha.	Left Justified
PROJECT NAME	19-66	48	√	Alpha.	Left Justified
CONTRACTOR NAME	68-103	36	√	Alpha.	Left Justified
ARROW OR PRECEDENCE	105-105	1	A,P	Fixed	Filled
CONTRACT NUMBER	107-112	6	√	Alpha.	Left Justified
PROJECT START	114-120	7	√	ddmmmyy	Filled
PROJECT END	122-128	7	√	ddmmmyy	Filled

6.b.(1) The RECORD IDENTIFIER is the first four characters of this record. The required value for this field shall be "PROJ". This record shall contain the general project information and indicates which scheduling method shall be used.

6.b.(2) The DATA DATE is the date of the schedule calculation. The abbreviation "ddmmmyy" refers to a date format that shall translate a date into two numbers for the day, three letters for the month, and two numbers for the year. For example, March 1, 1999 shall be translated into 01Mar99. This same convention for date formats shall be used throughout the entire data format. To ensure that dates are translated consistently, the following abbreviations shall be used for the three character month code:

Abbreviation	Month
JAN	January
FEB	February
MAR	March
APR	April
MAY	May
JUN	June
JUL	July
AUG	August
SEP	September
OCT	October
NOV	November
DEC	December

6.b.(3) The PROJECT IDENTIFIER is a maximum four character abbreviation for the schedule. These four characters shall be used to uniquely identify the project and specific update as agreed upon by Contractor and Contracting Officer. When utilizing scheduling software these four characters shall be used to select the project. Software manufacturers shall provide information to users to ensure that data importing programs do not automatically overwrite other schedules with the same PROJECT IDENTIFIER.

6.b.(4) The PROJECT NAME field shall contain the name and location of the project edited to fit the space provided. The data appearing here shall appear on scheduling software reports. The abbreviation "Alpha." refers to an "Alphanumeric" field value and shall be used throughout the remainder of this specification.

6.b.(5) The CONTRACTOR NAME field shall contain the Construction Contractor's name, edited to fit the space provided.

6.b.(6) The ARROW OR PRECEDENCE field shall indicate which method shall be used for calculation of the schedule. The value "A" shall signify the Arrow Diagramming Method. The value "P" shall signify the Precedence Diagramming Method. The ACTIVITY ID field of the Activity Record shall be interpreted differently depending on the value of this field. The Precedence Record shall be required if the value of this field is "P". [Usage note: software systems may not support both arrow and precedence diagramming. It is recommended that the selection of the type of network be based on the capabilities of the software used by project partners.]

6.b.(7) The CONTRACT NUMBER field shall contain the contract number for the project. For example, the construction contract number DACA85-89-C-0001 shall be entered into this field as "890001".

6.b.(8) The PROJECT START field shall contain the date that the Contractor acknowledges the Notice to Proceed (NTP). [Usage note: Software systems may use a project start date to constrain the first activity of a network. To ensure consistent scheduling calculations across products, it is recommended that the first activity in the schedule contain an EARLY START constraint and a software system's PROJECT START date only be used to report on the project's start date.]

6.b.(9) The PROJECT END field shall contain the date that the Contractor plans to complete the work as approved by the Contracting Officer. [Usage note: software systems may use a project end date to constrain the last activity of a network. To ensure consistent scheduling calculations across products, it is recommended that the last activity in the schedule contain an EARLY START constraint and a software system's PROJECT END date only be used to report on the project's end date.]

6.c. Calendar Record: The Calendar Record(s) shall follow the Project Identifier Record in the first disk of data transferred. A minimum of one Calendar Record shall be required for all data exchange activity files. The format for the Calendar Record shall be as follows:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1 - 4	4	CLDR	Fixed	Filled
CALENDAR CODE	6 - 6	1	√	Alpha.	Filled
WORKDAYS	8 - 14	7	SMTWTFS	Fixed	Filled
CALENDAR DESCRIPTION	16-45	30	√	Alpha.	Left Justified

6.c.(1) The RECORD IDENTIFIER shall always begin with "CLDR" to identify it as a Calendar Record. Each Calendar Record used shall have this identification in the first four columns. [Usage note: Systems contain a variety of calendar options. It is recommended that the least common denominator of calendar features between the systems be used as the basis for creating the SDEF file for a given project.]

6.c.(2) The CALENDAR CODE shall be used in the activity records to signify that this calendar is associated with the activity. [Usage note: Some systems do not allow for alphanumeric CALENDAR CODES, but only allow positive integers from 1 to 9. It is recommended that only positive integers be used for the CALENDAR CODE field to support the widest variety of scheduling systems.]

6.c.(3) The WORKDAYS field shall contain the work-week pattern selected with "Y", for Yes, and "N", for No. The first character shall be Sunday and the last character Saturday. An example of a typical five (5) day work-week would be NYYYYYN. A seven (7) day work-week would be YYYYYYY.

6.c.(4) The CALENDAR DESCRIPTION shall be used to briefly describe the calendar used.

6.d. Holiday Record: The Holiday Record(s) shall follow the Calendar Record(s) in the first disk of data transferred. There may be calendars without any holidays designated or several Holiday Records for each Calendar Record(s). The format for the Holiday Record shall be as follows:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1-4	4	HOLI	Fixed	Filled
CALENDAR CODE	6-6	1	√	Alpha.	Filled
HOLIDAY DATE	8-14	7	√	ddmmmyy	Filled
HOLIDAY DATE	16-22	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	24-30	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	32-38	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	40-46	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	48-54	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	56-62	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	64-70	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	72-78	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	80-86	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	88-94	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	96-102	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	104-110	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	112-118	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	120-126	7	-	ddmmmyy	May be Filled

6.d.(1) The RECORD IDENTIFIER shall always begin with "HOLI". Each Holiday Record used shall have this identification in the first four columns.

6.d.(2) The CALENDAR CODE indicates which work-week calendar the holidays shall be applied to. More than one HOLI record may be used for a given CALENDAR CODE.

6.d.(3) The HOLIDAY DATE shall contain the date of each individual non-work day.

6.e. Activity Records: Activity Records shall follow any Holiday Record(s). If there are no Holiday Record(s), then the Activity Records shall follow the Calendar Record(s). There shall be one Activity Record for every activity in the network. Each activity shall have one record in the following format:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1-4	4	ACTV	Fixed	Filled
ACTIVITY ID	6-15	10	√	Integer	See Comment Below
ACTIVITY DESCR.	17-46	30	√	Alpha.	Left Justified
ACTIVITY DURATION	48-50	3	√	Integer	Right Justified
CONSTRAINT DATE	52-58	7		ddmmmyy	May be Filled
CONSTRAINT TYPE	60-61	2		ES or LF	May be Filled
CALENDAR CODE	63-63	1	√	Alpha.	Filled
HAMMOCK CODE	65-65	1	Y, blank	Fixed	May be Filled
WORKERS PER DAY	67-69	3		Integer	Right Justified
RESPONSIBILITY CODE	71-74	4		Alpha.	Left Justified
WORK AREA CODE	76-79	4		Alpha.	Left Justified
MOD OR CLAIM NO.	81-86	6		Alpha.	Left Justified
BID ITEM	88-93	6		Alpha.	Left Justified
PHASE OF WORK	95-96	2		Alpha.	Left Justified
CATEGORY OF WORK	98-98	1		Alpha.	May be Filled
FEATURE OF WORK	100-128	30		Alpha.	Left Justified

6.e.(1) The RECORD IDENTIFIER for each activity description record must begin with the four character "ACTV" code. This field shall be used for both the Arrow Diagram Method (ADM) and Precedence Diagram Method (PDM).

6.e.(2) The ACTIVITY ID consists of coding that shall differ, depending on whether the ADM or PDM method was selected in the Project Record. If the ADM method was selected then the field shall be interpreted as two right-justified fields of five (5) integers each. If the PDM method was selected the field shall be interpreted as one (1) right-justified field of ten (10) integers each. The maximum activity number allowed under this arrangement is 99999 for ADM and 9999999999 for the PDM method. [Usage note: Many systems allow alphanumeric ACTIVITY IDs. While the SDEF does not strictly, allow the use of alphanumeric values, users may agree to use the ACTIVITY ID field to exchange alphanumeric data. It is recommended that the ACTIVITY ID be restricted to integers when one or more of the systems being used for scheduling allows only integer ACTIVITY ID values.]

6.e.(3) The ACTIVITY DESCRIPTION shall be a maximum of 30 characters. Descriptions must be limited to the space provided.

6.e.(4) The ACTIVITY DURATION contains the estimated original duration for the activity on the schedule. The duration shall be based upon the work-week designated by the activity's related calendar.

6.e.(5) The CONSTRAINT DATE field shall be used to identify a date that the scheduling system may use to modify float calculations. If there is a date in this field, then there must be a valid entry in the CONSTRAINT TYPE field.

6.e.(6) The CONSTRAINT TYPE field shall be used to identify the way that the scheduling system shall use the CONSTRAINT DATE to modify schedule float calculations. If there is a value in this field, then there must be a valid entry in the CONSTRAINT DATE field. The valid values for the CONSTRAINT TYPE are as follows:

Code	Definition
ES	The CONSTRAINT DATE shall replace an activity's early start date, if the early start date is prior to the CONSTRAINT DATE.
LF	The CONSTRAINT DATE shall replace an activity's late finish date, if the late finish date is after the CONSTRAINT DATE.

[Usage note: Systems provide a wide variety of constraint types that may not be supported by other systems. It is recommended that constraint types be restricted to the values above regardless of the capabilities of the various systems being used for scheduling.]

6.e.(7) The CALENDAR CODE relates this activity to an appropriate work-week calendar. The ACTIVITY DURATION must be based on the valid work-week referenced by this CALENDAR CODE field.

6.e.(8) The HAMMOCK CODE indicates that a particular activity does not have its own independent duration, but takes its start dates from the start date of the preceding activity (or node) and takes its finish dates from the finish dates of its succeeding activity (or node). If the value of the HAMMOCK CODE field is "Y", then the activity is a hammmock activity.

6.e.(9) The WORKERS PER DAY shall contain the average number of workers expected to work on the activity each day the activity is in progress. If this code is required by project scheduling specifications, values for this data will be right justified. Activities without workers per day shall have a value of "0".

6.e.(10) The RESPONSIBILITY CODE shall identify the subcontractors or major trade involved with completing the work for the activity. If this code is required by project scheduling specifications, value for this data will be left justified.

6.e.(11) The WORK AREA CODE shall identify the location of the activity within the project. If this code is required by project scheduling specifications, value for this data will be left justified.

6.e.(12) The MOD OR CLAIM NUMBER shall uniquely identify activities that are added or changed on a construction contract modification, or activities that justify any claimed time extensions. If this code is required by project scheduling specifications, value for this data will be left justified.

6.e.(13) The BID ITEM shall identify the bid item number associated with each activity. If this code is required by project scheduling specifications, value for this data will be left justified.

6.e.(14) The PHASE OF WORK shall identify the timing of a specific activity within the entire project. If this code is required by project scheduling specifications, value for this data will be left justified.

6.e.(15) The CATEGORY OF WORK shall identify the general type of work performed by every activity. If this code is required by project scheduling specifications, value for this data will be placed in the field.

6.e.(16) The FEATURE OF WORK shall identify a very broad designation of the general type of work that is being accomplished by the activity. If this code is required by project scheduling specifications, value for this data will be left justified. [Usage note: Many systems require that FEATURE OF WORK values be placed in several activity code fields. It is recommended that users review SDEF documentation to determine the correct way to use a given software system to produce the FEATURE OF WORK code.]

6.f. Precedence Record: The Precedence Record(s) shall follow the Activity Records if a Precedence Diagram Method schedule (PDM) is identified in the ARROW OR PRECEDENCE field of the Project Record. The Precedence Record has the following format:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1 - 4	4	PRED	Fixed	Filled
ACTIVITY ID	6-15	10	√	Integer	See Comment Below
PRECEDING ACTIVITY	17 -26	10	√	Integer	See Comment Below
PREDECESSOR TYPE	28-28	1	√	S, F, C	Filled
LAG DURATION	30-33	4	√	Integer	Right Justified

6.f.(1) The RECORD IDENTIFIER shall begin with the four characters "PRED" in the first four columns of the record.

6.f.(2) The ACTIVITY ID identifies the activity whose predecessor shall be specified in this record.

6.f.(3) The PRECEDING ACTIVITY number is the number of an activity that precedes the activity noted in the ACTIVITY ID field.

6.f.(4) The PREDECESSOR TYPE field indicates the type of relation that exists between the chosen pair of activities. Valid PREDECESSOR TYPE fields areas follows:

Code	Definition
S	Start-to-Start relation
F	Finish-to-Finish relation
C	Finish-to-Start relation

[Usage note: Some systems provide additional predecessor types that may not be supported by all other systems. It is recommended that predecessor types be restricted to the values above regardless of the capabilities of the various systems being used for scheduling.]

6.f.(5) The LAG DURATION field contains the number of days delay between the preceding and current activity. [Usage note: Some systems allow negative values for the LAG DURATION. Because these values are not supported by all other systems, it is recommended that values be restricted to zero and positive integers.]

6.g. Unit Cost Record: The Unit Cost Record shall follow all Precedence Records. If the schedule utilizes the Arrow Diagram Method, then the Unit Cost Record shall follow any Activity records. There shall be one Unit Cost Record for every activity that is not a lump sum activity. [Usage note: (1) It is recommended that users who wish to exchange unit cost data contact SDEF vendor representatives to determine the ability of the software system to import/export unit cost information. (2) If the software being used by each member of the project team supports unit cost data then users may wish to conduct a trial run of the SDEF data exchange with a two or three-activity network to ensure that unit cost data transfers as expected. If problems are found please consult vendor representatives for resolution prior to exchange of full project schedules. (3) Unit cost record data does not, in most systems, result in the correct values being placed in the ACTIVITY COST and COST TO DATE fields of the Progress (PROG) Record. Users must, at this time, manually transfer the data from the Unit Cost Record to the Progress Record.]

The fields for this record shall take the following format:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1-4	4	UNIT	Fixed	Filled
ACTIVITY ID	6-15	10	√	Integer	See Comment Below
TOTAL QTY	17-29	13	√	Format 8.4	Right Justified
COST PER UNIT	31-43	13	√	Format 8.4	Right Justified
QTY TO DATE	45-57	13	√	Format 8.4	Right Justified
UNIT OF MEASURE	59-61	3	√	Alpha.	Left Justified

6.g.(1) The RECORD IDENTIFIER shall be identified with the four characters 'UNIT" placed in the first four columns of the record.

6.g.(2) The ACTIVITY ID for each activity shall match the format described in the activity record. Each activity may have only one Unit Cost Record.

6.g.(3) The TOTAL QTY is the total amount of material to be used in this activity. This number consists of eight digits, one decimal point and four more digits. An example of a number in this format is "11111111.1111". If decimal places are not needed this field shall still contain a ".0000" in columns 25-29. [Usage note: Many systems support a different format for this value that does not include as many decimal places. It is recommended that users determine their requirements for significant digits based on the lowest common denominator of the software systems being used for a given project.]

6.g.(4) The COST PER UNIT is the cost, in dollars and cents, for each unit to be used in this activity. This number consists of eight digits, one decimal point, and four more digits. An example of a number in this format is "11111111.1111". If decimal places are not needed this field shall still contain a ".0000" in columns 39-43. [Usage note: Many systems support a different format for this value that does not include as many decimal places. It is recommended that users determine their requirements for significant digits based on the lowest common denominator of the software systems being used for a given project.]

6.g.(5) The QTY TO DATE is the quantity of material installed in this activity up to the data date. This number consists of eight digits, one decimal point, and four more digits. An example of a number in this format is "11111111.1111". If decimal places are not needed this field shall still contain a ".0000" in columns 53-57. [Usage note: Many systems support a different format for this value that does not include as many decimal places. It is recommended that users determine their requirements for significant digits based on the lowest common denominator of the software systems being used for a given project.]

6.g.(6) The UNIT OF MEASURE is an abbreviation that may be used to describe the units being measured for this activity. Valid values for this field are any meaningful English or metric unit, except "LS" for Lump Sum. Lump Sum activities are not to have Unit Cost Records.

6.h. Progress Record: Progress Record(s) shall follow all Unit Cost Record(s). If there are no Unit Cost Record(s), then the Progress Record(s) shall follow all Precedence Records. If the schedule utilizes the Arrow Diagram Method, then the Progress Record shall follow any Activity Records. One Progress Record is required for every activity in the Activity Record. The fields for this Record shall be provided in the following format:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1-4	4	PROG	Fixed	Filled
ACTIVITY ID	6-5	10	√	Integer	See Comment Below
ACTUAL START DATE	17-23	7	√	ddmmmyy	Filled if Started
ACTUAL FINISH DATE	25-31	7	√	ddmmmyy	Filled if Finished
REMAINING DURATION	33-35	3	√	Integer	Right Justified
ACTIVITY COST	37-48	12	√	Format 9.2	Right Justified
COST TO DATE	50-61	12	√	Format 9.2	Right Justitied
STORED MATERIAL	63-74	12	√	Format 9.2	Right Justified
EARLY START DATE	76-82	7	√	ddmmmyy	Filled if Not Started
EARLY FINISH DATE	84-90	7	√	ddmmmyy	Filled if Not Finished
LATE START DATE	92-98	7	√	ddmmmyy	Filled if Not Started
LATE FINISH DATE	100-1067		√	ddmmmyy	Filled if Not Finished
FLOAT SIGN	108-1081		+,-	Fixed	Filled if Not Finished
TOTAL FLOAT	110-1123		√	Integer	R. Just. if Not Finished

6.h.(1) The RECORD IDENTIFIER shall begin with the four characters "PROG" in the first four columns of the record.

6.h.(2) The ACTIVITY ID for each activity for which progress has been posted shall match the format described in the Activity Record.

6.h.(3) An ACTUAL START DATE is required for all in-progress activities. The ACTUAL START DATE shall be the same as, or later than, the PROJECT START date contained in the Project Record. The ACTUAL START DATE shall also be the same as, or prior to, the DATA DATE contained in the Project Record. If there is an ACTUAL START DATE for an activity that there must also be a REMAINING DURATION, and the values for the EARLY START DATE and LATE START DATE are blank. [Usage note: Some systems allow default values for ACTUAL START DATE if the date is not entered by the user. Because the failure to include a start date for activities may result in different schedule calculations, it is recommended that the ACTUAL START DATE be required for all activities in progress.]

6.h.(4) An ACTUAL FINISH DATE is required for all completed activities. If the REMAINING DURATION of an activity is zero, then there must be an ACTUAL FINISH DATE. If there is an ACTUAL FINISH DATE, then values for the EARLY START DATE, LATE START DATE, EARLY FINISH DATE, LATE FINISH DATE, FLOAT SIGN, and TOTAL FLOAT shall be blank. [Usage note: Some systems allow default values for ACTUAL FINISH DATE if the date is not entered by the user. Because the failure to include a finish date for activities may result in different schedule calculations, it is recommended that the ACTUAL FINISH DATE be required for all activities in progress.]

6.h.(5)AREMAININ G DURATION is required for all activities. Activities that have not started shall have a remaining duration equal to their original duration. Activities completed based on time, shall have a zero (0) REMAINING DURATION. [Usage note: Systems have a variety of "short-cut" methods to determine the REMAINING DURATION value. It is recommended that users actually consider the time required to complete the remaining work on a given task, rather than allow a system to calculate the remaining duration based on the amount of work that has already been accomplished.]

6.h.(6) The ACTIVITY COST contains the estimated earned value of the work to be accomplished in the activity. An example of a number in this format is "1111111 11.11". If decimal places are not needed this field shall still contain a ".00" in the last three columns of this field. [Usage note: Users should inquire of software vendors if the user needs to add a zero in the data field to produce the default value "0.00".]

6.h.(7) The COST TO DATE contains the earned value for the activity. If there is an ACTUAL START DATE, then there must also be some value for COST TO DATE. An example of a number in this format is "111111111.11". If decimal places are not needed, this field shall still contain a ".00" in the last three columns of this field. The COST TO DATE is not tied to REMAINING DURATION. For example, if the REMAINING DURATION is "0", the COST TO DATE may only be 95% of the ACTIVITY COST. This difference may be used to reflect 5% retainage for punch list items. [Usage note: Systems implement cost information in different ways. It is recommended that users carefully review SDEF documentation and test results to determine how to ensure that SDEF data is exported correctly.]

6.h.(8) The STORED MATERIAL field contains the value of the material that the Contractor has paid for and is on site or in secure storage areas that is a portion of the COST TO DATE. An example of a number in this format is "111111111.11". If decimal places are not needed, this field shall still contain a ".00" in the last three columns of this field. [Usage note: Systems implement the stored materials field in a variety of ways. Many systems do not enforce STORED MATERIAL + COST TO DATE < ACTIVITY COST. To avoid potential confusion between systems, it is recommended that new activities be added to a schedule to reflect the cost of large equipment procurement rather than use the STORED MATERIALS field.]

6.h.(9) The EARLY START DATE indicates the earliest date possible that an activity can start as calculated by a CPM scheduling system or other Contracting Officer approved planning method. If the progress record for an activity contains an ACTUAL START DATE, then this field shall be blank.

6.h.(10) The EARLY FINISH DATE indicates the earliest date possible that an activity can finish as calculated by a CPM scheduling system or other Contracting Officer approved planning method. If the progress record for an activity contains an ACTUAL FINISH DATE, then this field shall be blank.

6.h.(11) The LATE START DATE indicates the latest date that an activity can begin as calculated by a CPM scheduling system or other Contracting Officer approved planning method. If the progress record for an activity contains an ACTUAL START DATE, then this field shall be blank.

6.h.(12) The LATE FINISH DATE indicates the latest date that an activity can finish as calculated by a CPM scheduling system or other Contracting Officer approved planning method. If the progress record for an activity contains an ACTUAL FINISH DATE, then this field shall be blank.

6.h.(13) The FLOAT SIGN indicates whether the float time calculated using a CPM scheduling system or other Contracting Officer approved planning method, is positive or negative in nature. If the progress record for an activity contains an ACTUAL FINISH DATE, then this field shall be blank. In the case of zero float this field shall be blank.

6.h.(14) The TOTAL FLOAT indicates the total float time. In the Precedence Diagram Method (PDM), the total float is the difference between the early and late start or finish dates. In the Arrow Diagram Method (ADM), the total float is equal to the late event time at the end of the activity, minus the sum of the early event time at the start of the activity plus the duration of the activity.

6.i. Project End Record: The Project End Record shall be used to identify that the data file is completed. If the ASCII End of File character is encountered, then data import programs shall use that character to infer that the data continues on the next disk. The user shall then be prompted for the next disk number, based on the VOLM record data. The Project End Record shall be the last record of the entire data file, and shall have the following format:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1-3	3	END	Fixed	Filled

6.i.(1) The RECORD IDENTIFIER for the Project End Record shall be "END". Data contained in the data exchange file that occurs after this record shall not be used.

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SECTION 01330

SUBMITTAL PROCEDURES

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SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUBMITTAL IDENTIFICATION

Submittals required are identified by SD numbers and titles as follows:

SD-01 Preconstruction Submittals

Project Schedule.
Submittal Register.
Safety Plan.
Construction Quality Control Plan.
Environmental Control Plan.
Waste Management Plan.

SD-02 Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.
Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the contractor for integrating the product or system into the project.
Drawings prepared by or for the contractor to show how multiple systems and interdisciplinary work will be coordinated.

SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials or equipment for some portion of the work.

Samples of warranty language when the contract requires extended product warranties.

SD-04 Samples

Physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of materials or product and establish standards by which the work can be judged.
Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project.

Field samples and mock-ups constructed on the project site to establish standards by which the ensuing work can be judged. Includes assemblies or portions of assemblies which are to be incorporated into the project and those which will be removed at the conclusion of the work.

SD-05 Design Data

Calculations, mix designs, analyses and other data pertaining to a part of the work.

SD-06 Test Reports

Report signed by an authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with the specified requirements. (Testing must have been within three years of date of contract award for the project, unless otherwise specified.)
Report which includes findings of a test required to be performed by the contractor on an actual portion of the work or prototype prepared for the project before shipment to the job site.
Report which includes findings of a test made at the job site or on a sample taken from the job site, on portion of work during or after installation.
Investigation reports.
Final testing and acceptance reports.

SD-07 Certificates

Statements signed by a responsible official of the company that manufactured a product, system or material attesting that product, system or material meets the specified requirements. Must be dated after award of the project contract, clearly name the project and identify the product, system or material being certified, including the specified required being met.

Documentation required of the Contractor, or of a supplier, installer or subcontractor through the contractor, the purpose of which is to verify the orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications.

SD-08 Manufacturer's Instructions

Preprinted material describing installation of a product, system or material, including, but not limited to, special notices, Material Safety Data Sheets (MSDS) concerning impedances, hazards and safety precautions.

SD-09 Manufacturer's Field Reports

Documentation of the testing and verification actions taken by the manufacturer's representative to confirm compliance with the manufacturer's standards or instructions.
Factory test reports.

SD-10 Operation and Maintenance Data

Data intended to be incorporated in operations and maintenance manuals.

SD-11 Closeout Submittals

Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.
As-built drawings.
As-built record of equipment and materials.
Final Approved Shop Drawings.

Real Property Equipment List.
Warranty Management Plan.
Warranty Tags.
Mechanical Testing, Adjusting, Balancing, and Commissioning Report.
Operation and Maintenance Manuals.
Final Clean-up List.

1.2 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.2.1 Government Approved

Governmental approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings." The Contractor shall provide the Government with six(6) copies of all Government Approved/Accepted construction submittals.

1.2.2 Information Only

All submittals not requiring Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above. The Contractor shall provide the Government with four (4) copies of all Information Only submittal.

1.3 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the CQC requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.4 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract Clause "Changes" shall be given promptly to the Contracting Officer.

1.5 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained and/or complete, satisfactory "FIO" submittals have not been received by the Government.

1.6 GOVERNMENT RESPONSIBILITY (For Design Build Task Order)

1.6.1 Extensions of Design

Government review is required for extensions of design construction submittals used to define contract conformity, and for deviation from the completed design. Review will be only for conformance with the contract requirements. Included are only those construction submittals for which the Designer of Record design documents do not include enough detail to ascertain contract compliance. Government review is not required for extensions of design such as structural steel or reinforcement shop drawings.

1.6.2 Government Accepted/Approved Submittals

The Contracting Officer's conformance review or approval of submittals shall not be construed as a complete check, but will indicate only that the design, general method of construction, materials, detailing and other information appear to meet the Solicitation and Accepted Proposal. Government review or approval will not relieve the Contractor of the responsibility for any errors that may exist. The Contractor, under the Design and CQC requirements of this contract, is responsible for the design, dimensions, all design extensions, such as the design of adequate connections and details, etc., and the satisfactory construction of all work. After submittals have been reviewed for conformance or accepted/approved, as applicable, by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.7 CONTRACTOR RESPONSIBILITY (For Design Build Task Order)

1.7.1 Designer of Record

The Designer of Record shall approve all extensions of design, critical materials, any deviations from the solicitation, the accepted proposal, the completed design, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction", these are considered to be "shop drawings". The Government may review Designer of Record approved submittals for conformance to the Solicitation and Accepted Proposal. The Government will review all submittals designated as deviating from the Solicitation or Accepted Proposal, as described below.

1.7.2 Disapproved Submittals

The Contractor shall make all corrections required by the Contracting Officer, obtain the Designer of Record's approval, when applicable, and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. Any "information only" submittal found to contain errors or unapproved deviations from the Solicitation or Accepted Proposal shall be resubmitted as one requiring "approval" action, requiring both Designer of Record and Government acceptance/approval. If the Contractor considers any correction indicated by the Government on the submittals to constitute a change to the contract, it shall promptly provide a notice in accordance with the Contract Clause "Changes" to the Contracting Officer.

1.8 WITHHOLDING OF PAYMENT (For Design Build Task Order)

No payment for materials incorporated in the work will be made if all

required Designer of Record or Government acceptances/approvals have not been obtained. No payment will be made for any materials incorporated into the work for any conformance review submittals or information only submittals found to contain errors or deviations from the Solicitation or Accepted Proposal.

1.9 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with this Section.

SD-01 Preconstruction Submittals

Submittal Register (ENG Form 4288); G.
Monthly updates (ENG form 4288)

Four copies of the completed ENG Form 4288.

Two copies of the monthly update as specified shall be submitted together with the monthly progress payment requests.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) representative and each item shall be stamped, signed, and dated by the CQC representative indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

3.1.1 Design Submittals

The Contractor shall provide design submittals in accordance with Section 01012 entitled "DESIGN AFTER AWARD".

3.2 SUBMITTAL REGISTER

At the end of this section is one set of Submittal Forms listing items of equipment and materials for which submittals are required by the

specifications; this list may not be all inclusive and additional submittals may be required. The Contractor shall use the government-provided software, QCS (see Section 01312), to create the ENG Form 4288. The Contractor is responsible for completing the columns labeled: Activity Number, Transmittal Number, and Contract Schedule Dates on the submittal resister form. The completed Submittal Resister shall be submitted to the Contracting Officer for approval within 30 calendar days after Notice to Proceed. The submit dates and need dates in the submittal register shall be coordinated with the dates in the Contractor's progress schedule. Updates to the Submittal Resister showing the Contractor action codes and actual submittal dates with Government action codes and action dates shall be submitted monthly together with the monthly payment request, or until all submittals have been satisfactory completed. When the progress schedule is revised, the submittal register shall also be revised and both resubmitted for approval. The approval submittal register will serve as a scheduling document for submittals and will be used to control submittal actions throughout the contract period.

3.3 SUBMITTAL REGISTER (ENG FORM 4288)(For Design Build Task Order)

The Designers of Record shall develop a complete list of submittals required during the design and construction phases of the contract. The Contractor shall develop a Submittal Register, ENG Form 4288, from this list, including any other submittals that may be required by other parts of the contract. The Contractor shall use the government-provided software, QCS (see Section 01312), to create the ENG Form 4288. The completed Submittal Register shall be submitted to the Contracting Officer for approval within 15 calendar days after Notice to Proceed with the design phase. The submit dates and need dates in the submittal register shall be coordinated with the dates in the Contractor's progress schedule. Updates to the submittal register showing the Contractor action codes and actual submittal dates with Government action codes and action dates shall be submitted monthly together with the monthly payment request, or until all submittals have been satisfactorily completed. When the progress schedule is revised, the submittal register shall also be revised and both resubmitted for approval. The approved submittal register will serve as a scheduling document for submittals and will be used to control submittal actions throughout the contract period.

3.4 SCHEDULING

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time (a minimum of 30 calendar days exclusive of mailing time) shall be allowed and shown on the register for review and approval. No delay damages or time extensions will be allowed for time lost in incorrect, incomplete and/or late submittals. An additional 15 calendar days shall be allowed and shown on the register for review and approval of submittals for food service equipment, fire sprinkler and fire alarm systems, and refrigeration and HVAC control systems.

3.5 TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms will be furnished to the Contractor. This form shall be

properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

3.5.1 USE

A transmittal form (ENG Form 4025) shall be used for submitting both Government approved and information only submittals. The Contractor shall use the government provided software, QCS (see Section 01312), to create the Eng Form 4025. A separate transmittal form shall be used for each specification section. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number the contract drawings pertinent to the date submitted or each item.

3.5.2 NUMBERING

Transmittals shall be numbered. The transmittal number shall consist of 2 parts, the specification number and the sequence number, e.g. 01330-001. Each specification section shall begin with the sequence number, 001. Resubmittals shall be identified by a decimal number appended to the original transmittal number, e.g. 01330-001.1, shall identify resubmittals.

3.6 SUBMITTAL PROCEDURE

Submittals shall be made as follows:

3.6.1 Procedures

The Contractor shall establish procedures for purchasing materials and equipment, subcontracting, and processing of shop drawings, outlining the responsibilities at each level to insure that adequate review and approval, timely delivery, verification of procedures and proper storage are provided. Delays in the review and approval process shall not be given consideration for a time extension or additional cost, when such delays are the result of the Contractor's late submittal or failure to provide proper submittals; or make corrections in compliance with the contract documents or the Contracting Officer's comments; or provide a resubmittal because if an unacceptable original submittal.

Submittals to the Contracting Officer are required in the number of copies identified in paragraphs 3.7 and 3.8 and shall be submitted to:

U.S. Army Corps of Engineer District, Honolulu
Fort Shafter Resident Office
Bldg 230
Fort Shafter, Hawaii 96858-5440

3.6.2 Deviations

a. For submittals which include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025 shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

b. In cases where "trade names or equal" are used in the plans and/or Technical Specifications, any "equal" substitution by the Contractor is considered a variance and will require the Government's approval. Approval action by the Contracting Officer will not relieve the Contractor of his quality control responsibility and compliance with the contract, except for those specific portions of the submittal which clearly highlight the departures from the contract, and which are brought to the attention of the Government. The Contractor shall be responsible for all corrective actions, when submittals containing provisions of non-compliance with the contract are not specifically brought to the Government's attention. Any associated cost or time loss from such corrective actions shall not be made subject to a claim against the Government.

c. Variations from the contract requirements may require an appropriate contract modification prior to acceptance by the Government; however, such pending action shall not be a basis of claim for time or additional cost against the Government, since the Contractor still has the option to comply with the original contract requirements. If the variation is of a minor nature and does not affect a change in cost or time of performance, a modification may not be issued. All variations shall meet the standards set by the contract documents.

3.7 COORDINATION OF LAYOUTS

The Contractor Quality Control (CQC) organization is responsible for insuring that the shop drawings and submittals of the different trades are coordinated in order that space conflicts during installation/construction of mechanical, electrical, architectural, civil, structural and other items of work are avoided. The Contractor shall be required to prepare/develop coordinated working layout drawings prior to commencement of any feature of work, at any contractor tier, unless otherwise directed by the Contracting Officer. These layout drawings shall be reviewed and certified by the CQC organization prior to the start of work in any area. The CQC shall insure that layout drawings indicate all necessary features of work, providing for a coordinated arrangement of the various installations, giving full consideration for access to installed equipment/systems and the future maintenance of these items. Interference between equipment and systems or construction materials which cannot be resolved between Contractor and subcontracting tiers shall be resolved by the Contracting Officer at no additional cost to the Government, if it is determined that adequate space was available and installations could have been accommodated within the designated construction area through properly coordinated layout drawings. One (1) CQC certified copy of all layout drawings shall be available for Government's review five (5) working days prior to scheduled commencement of the work. Submission shall be made upon Government's request.

3.8 CONTROL OF SUBMITTALS

The Contractor shall carefully control his procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

3.8.1 Monthly Updates of Submittal Register

Monthly updates of the initially accepted Submittal Registers, ENG Form 4288, shall be submitted in duplicate at the time the monthly progress payment is requested and be current to within one (1) week of the date of submission. When a monthly payment is not being requested, the update

shall be submitted on the 15th of each month or the workday closest to the 15th. If the Contractor fails to provide the Government acceptable initial submittal registers or monthly updates within the specified time frames, the Government may issue a stop work order and/or withhold a portion of pending progress payments due to non-performance. Any resulting cost or time loss to the Contractor due to such Government action shall not be subject to a claim for the time extensions, additional cost or for damages by the Contractor. Furnishing of the submittal registers by the Contractor and subsequent review/acceptance by the Government do not relieve the Contractor of the obligation to comply with all of the contract submittal requirements; for example, even if a required submittal was not originally listed on the initial register accepted by the Government, the Contractor will still be responsible for providing such submittal in accordance with the contract. The following shall be provided on the monthly updates to the initially accepted schedule:

a. Activity No., Transmittal No., and entries under other columns, as appropriate.

b. Distinguish those submittals which are VARIANCES, as appropriate.

c. Furnish a separate LISTING of required SUBMITTALS, together with the Government's review comments, and appropriate Contractor's status report on pending resubmittal actions.

d. Furnish a separate LISTING of SUBMITTALS provided by the Contractor to the Government; and another separate LISTING of SUBMITTALS returned by the Government to the Contractor, for the particular month the update is furnished.

3.9 GOVERNMENT APPROVED SUBMITTALS

Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. 3 copies of the submittal will be retained by the Contracting Officer and 1 copy of the submittal will be returned to the Contractor.

3.10 GOVERNMENT ACCEPTED/APPROVED SUBMITTALS (For Design Build Task Order)

Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. The Contracting Officer will retain four (4) copies of the submittal and two (2) copies of the submittal will be returned to the Contractor. If the Government performs a conformance review of other Designer of Record approved submittals, the submittals will be so identified and returned, as described above.

3.11 INFORMATION ONLY SUBMITTALS

Submittals provided For Information Only (FIO) to the Government shall be submitted in three (3) copies, including resubmittals. Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does

not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

3.12 STAMPS

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to the following:

CONTRACTOR
(Firm Name)
_____ I hereby certify that the (material) (equipment) (article) shown and marked in this submittal and proposed to be incorporated in Contract No. (DACA83- - -), is in compliance with the contract drawings and specifications, can be installed in the allocated spaces, and is approved for use.
SIGNATURE: _____
TITLE: _____
DATE: _____

-- End Of Section --

3.13 STAMPS (For Design Build Task Order)

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to the following:

CONTRACTOR
(Firm Name)
_____ Approved
_____ Approved with corrections as noted on submittal data and/or attached sheets(s).
SIGNATURE: _____

TITLE: (DESIGNER OF RECORD)

DATE: _____

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION: Matoc IDIQ

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	CLASSIFICATION GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01320Q	SD-01 Preconstruction Submittals														
			Preliminary Project Schedule		G												
			Initial Project Schedule		G												
			Periodic Schedule Updates		G												
			SD-06 Test Reports														
			Narrative Report.														
			Schedule Reports.														
			SD-07 Certificates														
			Qualifications		G												
		01330	SD-01 Preconstruction Submittals														
			Submittal Register (ENG Form														
			4288); G.														
			Monthly updates (ENG form 4288)														
		01451Q	SD-01 Preconstruction Submittals														
			Quality Control Plan		G												
			Task Order-Specific Quality		G												
			Control Plan														
		01780	SD-02 Shop Drawings														
			As-Built Drawings														
			SD-03 Product Data														
			As-Built Record of Equipment and														
			Materials														
			Warranty Management Plan														
			Warranty Tags														
			Final Clean-Up														
		01900	SD-01 Preconstruction Submittals														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION: Matoc IDIQ

CONTRACTOR:

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	CLASSIFICATION GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01900	Progress Chart		G												
			SD-02 Shop Drawings														
			As-Built Drawings														
			SD-03 Product Data														
			Equipment Data														
			Recovered Material Report														
			SD-06 Test Reports														
			Inspection of Existing Conditions														
			Dust Control		G												
			Excavation/Trenching Clearance														
			Condition of Contractor's														
			Operation or Storage Area														
			SD-07 Certificates														
			Products Containing Recovered														
			Materials														

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATE OF COMPLIANCE *(Read instructions on the reverse side prior to initiating this form)*	DATE	TRANSMITTAL NO.

SECTION 1 - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS: (This section will be initiated by the Contractor)

TO: FROM:	CONTRACT NO.	CHECK ONE: ☐ THIS IS A NEW TRANSMITTAL ☐ THIS IS A RESUBMITTAL OF TRANSMITTAL _____
SPECIFICATION SEC. NO. *(Cover only one section with each transmittal)*	PROJECT TITLE AND LOCATION	CHECK ONE: THIS TRANSMITTAL IS FOR ☐ FIO ☐ GOV'T. APPROVAL

ITEM NO.	DESCRIPTION OF ITEM SUBMITTED *(Type size, model number/ etc.)*	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. *(See Instruction No. 8)*	NO. OF COPIES	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE	VARIATION *(See Instruction No. 6)*	FOR CE USE CODE
				SPEC. PARA. NO.	DRAWING SHEET NO.			
a.	*b.*	*c.*	*d.*	*e.*	*f.*	*g.*	*h.*	*i.*

REMARKS	I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated. _____ NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED *(List by Item No.)*	NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY	DATE

INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.

2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No." This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.

3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288-R for each entry on this form.

4. Submittals requiring expeditious handling will be submitted on a separate form.

5. Separate transmittal form will be used for submittals under separate sections of the specifications.

6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications -- also, a written statement to that effect shall be included in the space provided for "Remarks."

7. Form is self-transmittal, letter of transmittal is not required.

8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.

9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i. to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

A -- Approved as submitted.	E -- Disapproved (See attached).
B -- Approved, except as noted on drawings.	F -- Receipt acknowledged.
C -- Approved, except as noted on drawings. Refer to attached sheet resubmission required.	FX -- Receipt acknowledged, does not comply as noted with contract requirements.
D -- Will be returned by separate correspondence.	G -- Other *(Specify)*

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

(Reverse of ENG Form 4025-R)

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01415

METRIC MEASUREMENTS

-- End of Section Table of Contents --

SECTION 01415

METRIC MEASUREMENTS

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM E 380	(1993) Practice for Use of the International System of Units (SI)
ASTM E 621	(1994; R 1999el) Practice for Use of Metric (SI) Units in Building Design and Construction

1.2 GENERAL

This project includes metric units of measurements. The metric units used are the International System of Units (SI) developed and maintained by the General Conference on Weights and Measures (CGPM); the name International System of Units and the international abbreviation SI were adopted by the 11th CGPM in 1960. A number of circumstances require that both metric SI units and English inch-pound (I-P) units be included in a section of the specifications. When both metric and I-P measurements are included, the section may contain measurements for products that are manufactured to I-P dimensions and then expressed in mathematically converted metric value (soft metric) or, it may contain measurements for products that are manufactured to an industry recognized rounded metric (hard metric) dimensions but are allowed to be substituted by I-P products to comply with the law. Dual measurements are also included to indicate industry and/or Government standards, test values or other controlling factors, such as the code requirements where I-P values are needed for clarity or to trace back to the referenced standards, test values or codes.

1.3 USE OF MEASUREMENTS

Measurements shall be either in SI or I-P units as indicated, except for soft metric measurements or as otherwise authorized. When only SI or I-P measurements are specified for a product, the product shall be procured in the specified units (SI or I-P) unless otherwise authorized by the Contracting Officer. The Contractor shall be responsible for all associated labor and materials when authorized to substitute one system of units for another and for the final assembly and performance of the specified work and/or products.

1.3.1 Hard Metric

A hard metric measurement is indicated by an SI value with no expressed correlation to an I-P value. Hard metric measurements are often used for field data such as distance from one point to another or distance above the floor. Products are considered to be hard metric when they are

manufactured to metric dimensions or have an industry recognized metric designation.

1.3.2 Soft Metric

a. A soft metric measurement is indicated by an SI value which is a mathematical conversion of the I-P value shown in parentheses (e.g. 38.1 mm (1-1/2 inches)). Soft metric measurements are used for measurements pertaining to products, test values, and other situations where the I-P units are the standard for manufacture, verification, or other controlling factor. The I-P value shall govern while the metric measurement is provided for information.

b. A soft metric measurement is also indicated for products that are manufactured in industry designated metric dimensions but are required by law to allow substitute I-P products. These measurements are indicated by a manufacturing hard metric product dimension followed by the substitute I-P equivalent value in parentheses (e.g., 190 x 190 x 390 mm (7-5/8 x 7-5/8 x 15-5/8 inches)).

1.3.3 Neutral

A neutral measurement is indicated by an identifier which has no expressed relation to either an SI or an I-P value (e.g., American Wire Gage (AWG) which indicates thickness but in itself is neither SI nor I-P).

1.4 COORDINATION

Discrepancies, such as mismatches or product unavailability, arising from use of both metric and non-metric measurements and discrepancies between the measurements in the specifications and the measurements in the drawings shall be brought to the attention of the Contracting Officer for resolution.

1.5 RELATIONSHIP TO SUBMITTALS

Submittals for Government approval or for information only shall cover the SI or I-P products actually being furnished for the project. The Contractor shall submit the required drawings and calculations in the same units used in the contract documents describing the product or requirement unless otherwise instructed or approved. The Contractor shall use ASTM E 380 and ASTM E 621 as the basis for establishing metric measurements required to be used in submittals.

-- End of Section --

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01420

SOURCES FOR REFERENCE PUBLICATIONS

SECTION 01420

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization, (e.g. ASTM B 564 Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the standards producing organization should be ordered from the source by title rather than by number.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)
700 Pennsylvania Avenue, N.W.
Washington, D.C. 20408
Phone: 866-325-7208
Internet: http://www.archives.gov

Order documents from:
Superintendent of Documents
U.S.Government Printing Office
732 North Capitol Street, NW
Washington, DC 20401
Mailstop: SDE
Ph: 866-512-1800 or 202-512-1800
Fax: 202-512-2250
Internet: http://www.gpo.gov
E-mail: gpoaccess@gpo.gov

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01430

ENVIRONMENTAL PROTECTION

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SECTION 01430

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

STATE OF HAWAII DEPARTMENT OF HEALTH (HIDOH)

HIDOH, Chapter 43	Administrative Rules, Title 11, Community Noise Control
HIDOH, Chapter 59	Administrative Rules, Ambient Air Quality Standards

1.2 GENERAL REQUIREMENTS

This section covers prevention of environmental pollution and damage as the result of construction operations under this contract and for those measures set forth in the TECHNICAL REQUIREMENTS. For the purpose of this specification, environmental pollution and damage is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic, cultural and/or historical purposes. The control of environmental pollution and damage requires consideration of air, water, and land, and includes management of visual aesthetics, noise, solid waste, radiant energy and radioactive materials, as well as other pollutants.

1.2.1 Subcontractors

Assurance of compliance with this section by subcontractors will be the responsibility of the Contractor.

1.2.2 Notification

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with the aforementioned Federal, State or local laws or regulations, permits, and other elements of the Contractor's environmental protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of proposed corrective action and take such action as may be approved. If the Contractor fails to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions will be granted or costs or damages allowed to the Contractor for any such suspension.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-06 Test Records

Environmental Protection Plan; G.

Within 30 calendar days of receipt of Notice to Proceed, the Contractor shall submit in writing an environmental protection plan. Approval of the Contractor's plan will not relieve the Contractor of his responsibility for adequate and continuing control of pollutants and other environmental protection measures. The environmental protection plan shall include but not be limited to the following:

a. A list of Federal, State, and local laws, regulations, and permits concerning environmental protection, pollution control and abatement that are applicable to the Contractor's proposed operations and the requirements imposed by those laws, regulations, and permits.

b. Methods for protection of features to be preserved within authorized work areas. The Contractor shall prepare a listing of methods to protect resources needing protection; i.e., trees, shrubs, vines, grasses and ground cover, landscape features, air and water quality, fish and wildlife, soil, historical, archeological, and cultural resources.

c. Procedures to be implemented to provide the required environmental protection and to comply with the applicable laws and regulations. The Contractor shall set out the procedures to be followed to correct pollution of the environment due to accident, natural causes, or failure to follow the procedures set out in accordance with the environmental protection plan.

d. Location of the solid waste disposal area.

e. Drawings showing locations of any proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials.

f. Environmental monitoring plans for the job site, including land, water, air, and noise monitoring.

g. Traffic control plan.

h. Methods of protecting surface and ground water during construction activities.

i. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas.

j. Plan of borrow area(s).

k. Training for his personnel during the construction period.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 PROTECTION OF ENVIRONMENTAL RESOURCES

The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract shall be protected during the entire period of this contract. The Contractor shall confine his activities to areas defined by the drawings and specifications.

3.1.1 Land Resources

Prior to the beginning of any construction, the Contractor shall identify all land resources to be preserved within the Contractor's work area. Except in areas indicated on the drawings or specified to be cleared, the Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without special permission from the Contracting Officer. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. Where such special emergency use is permitted, the Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs.

3.1.1.1 Work Area Limits

Prior to any construction, the Contractor shall mark the areas that are not required to accomplish all work to be performed under this contract. Isolated areas within the general work area which are to be saved and protected shall also be marked or fenced. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, the markers shall be visible. The Contractor shall convey to his personnel the purpose of marking and/or protection of all necessary objects.

3.1.1.2 Protection of Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features indicated and defined on the drawings to be preserved shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques.

3.1.1.3 Reduction of Exposure of Unprotected Erodible Soils

Earthwork brought to final grade shall be finished as indicated and specified. Side slopes and back slopes shall be protected as soon as practicable upon completion of rough grading. All earthwork shall be planned and conducted to minimize the duration of exposure of unprotected soils. Except in instances where the constructed feature obscures borrow areas, quarries, and waste material areas, these areas shall not initially be cleared in total. Clearing of such areas shall progress in reasonably sized increments as needed to use the areas developed as approved by the Contracting Officer.

3.1.1.4 Protection of Disturbed Areas

Such methods as necessary shall be utilized to effectively prevent erosion and control sedimentation, including but not limited to the following:

a. Retardation and Control of Runoff: Runoff from the construction site shall be controlled by construction of diversion ditches, benches, and berms to retard and divert runoff to protected drainage courses, and any measures required by areawide plans approved under Paragraph 208 of the Clean Water Act.

b. Erosion and Sedimentation Control Devices: The Contractor shall construct or install all temporary and permanent erosion and sedimentation control features as indicated on the drawings. Temporary erosion and sediment control measures such as berms, dikes, drains, sedimentation basins, grassing, and mulching shall be maintained until permanent drainage and erosion control facilities are completed and operative.

c. Sediment Basins: Sediment from construction areas shall be trapped in temporary or permanent sediment basins in accordance with basin plans shown on the drawings. The basins shall accommodate the runoff of a local design year storm. After each storm, the basins shall be pumped dry and accumulated sediment shall be removed as necessary to maintain basin effectiveness. Overflow shall be controlled by paved weir or by vertical overflow pipe, draining from the surface. The collected topsoil sediment shall be reused for fill on the construction site, and/or conserved (stockpiled) for use at another site(s). The Contractor shall institute effluent quality monitoring programs as required by State and local environmental agencies.

3.1.1.5 Contractor Facilities and Work Areas

a. Location of Field Offices, Storage, and Other Contractor Facilities: The Contractors' field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas designated on the drawings or as directed by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made only on approval by the Contracting Officer.

b. Borrow Areas on Government Property: Borrow areas shall be managed to minimize erosion and to prevent sediment from entering nearby waters.

c. Spoil Areas on Government Property: Spoil areas shall be managed and controlled to limit spoil to areas designated on the drawings and prevent erosion of soil or sediment from entering nearby waters. Spoil areas shall be developed in accordance with the grading plan indicated on the drawings.

d. Temporary Excavations and Embankments: Temporary excavations and embankments for plant and/or work areas shall be controlled to protect adjacent areas from despoilment.

3.1.2 Disposal of Wastes

Disposal of wastes shall be as specified in Section 01900 MISCELLANEOUS PROVISIONS and as specified hereinafter.

3.1.2.1 Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. All handling and disposal shall be conducted to prevent contamination. Segregation measures shall be employed such that no hazardous or toxic waste will become commingled with solid waste. The Contractor shall transport all solid waste off Government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal. The Contractor shall comply with site procedures and with Federal, State, and local laws and regulations pertaining to the use of landfill areas.

3.1.2.2 Chemical Wastes:

Chemicals shall be dispensed in a way to adequately ensure no spillage to ground or water. Periodic inspections of dispensing areas to identify leakage and initiate corrective action shall be performed and documented. This documentation will be periodically reviewed by the Government. Chemical waste shall be collected in corrosion resistant containers with care taken to ensure compatibility. Collection drums shall be monitored and removed to a staging or storage area when contents are within six inches of the top. All waste shall be disposed of in accordance with Federal and local laws and regulations.

3.1.2.3 Hazardous Wastes:

The Contractor shall take sufficient measures to prevent spillage of hazardous and toxic materials during dispensing and shall collect waste in suitable containers observing compatibility. The Contractor shall transport all hazardous waste off Government property and dispose of it in compliance with Federal and local laws and regulations. Spills of hazardous or toxic materials shall be immediately reported to the Contracting Officer. Cleanup and cleanup costs due to spills shall be the responsibility of the Contractor.

3.1.3 Historical, Archeological, and Cultural Resources

Existing historical, archeological, and cultural resources within the Contractor's work area will be so designated by the Contracting Officer if any has been identified. The Contractor shall take precautions to preserve all such resources as they existed at the time they were pointed out to him. The Contractor shall provide and install all protection for these resources so designated and shall be responsible for their preservation during this contract. If during excavation or other construction activities in areas with existing or known resources, as well as in any other work area], any previously unidentified or unanticipated resources are discovered or found, all activities that may damage or alter such resources shall be temporarily suspended. These resources or cultural remains (prehistoric or historic surface or subsurface) include but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rocks or coral alignments, paving, wall, or other constructed features; and any indication of agricultural or other uses. Upon such discovery or find, the Contractor shall immediately notify the Contracting Officer. When so notified, the Contracting Officer will initiate action so that prompt and proper data recovery can be accomplished. In the mean time, recording and preservation of historical and archeological finds during construction activities shall be reported in accordance with the SPECIAL CONTRACT REQUIREMENTS.

3.1.4 Water Resources

The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface and ground waters. Special management techniques as set out below shall be implemented to control water pollution by the listed construction activities which are included in this contract.

3.1.4.1 Washing and Curing Water

Waste waters directly derived from construction activities shall not be allowed to enter water areas. These waste waters shall be collected and placed in retention ponds where suspended material can be settled out or the water evaporates so that pollutants are separated from the water.

3.1.4.2 Cofferdam and Diversion Operations

The Contractor shall plan his operation and perform all work necessary to minimize adverse impact of violation of the water quality standard. Construction operations for dewatering, removal of cofferdams, tailrace excavation, and tunnel closure shall be controlled at all times to limit the impact of water turbidity on the habitat for wildlife and impacts on water quality for downstream use.

3.1.4.3 Stream Crossings

Stream crossings shall be controlled during construction. Crossings shall provide movement of materials or equipment which do not violate water pollution control standards of the Federal, State or local government.

3.1.4.4 Monitoring of Water Areas:

Monitoring of water areas affected by construction activities shall be the responsibility of the Contractor. All water areas affected by construction activities shall be monitored by the Contractor.

3.1.5 Fish and Wildlife Resources

The Contractor shall keep construction activities under surveillance, management and control to minimize interference with, disturbance to and damage of fish and wildlife. Species that require specific attention along with measures for their protection will be listed by the Contractor prior to beginning of construction operations.

3.1.6 Air Resources

The Contractor shall keep construction activities under surveillance, management and control to minimize pollution of air resources. All activities, equipment, processes, and work operated or performed by the Contractor in accomplishing the specified construction shall be in strict accordance with HIDOH, Chapter 59, HIDOH, Chapter 60, and all Federal emission and performance laws and standards. Ambient Air Quality Standards set by the Environmental Protection Agency shall be maintained for those construction operations and activities specified in this section. Special management techniques as set out below shall be implemented to control air pollution by the construction activities which are included in the contract.

3.1.6.1 Particulates

a. Dust particles, aerosols, and gaseous by-products from all construction activities, processing and preparation of materials, such as from asphaltic batch plants, shall be controlled at all times, including weekends, holidays and hours when work is not in progress.

b. The Contractor shall maintain all excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and all other work areas within or outside the project boundaries free from particulates which would cause the air pollution standards mentioned in paragraph Air Resources, herein before, to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, light bituminous treatment, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated at such intervals as to keep the disturbed area damp at all times. The Contractor must have sufficient competent equipment available to accomplish this task. Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs.

3.1.6.2 Hydrocarbons and Carbon Monoxide

Hydrocarbons and carbon monoxide emissions from equipment shall be controlled to Federal and State allowable limits at all times.

3.1.6.3 Odors

Odors shall be controlled at all times for all construction activities, processing and preparation of materials.

3.1.6.4 Monitoring of Air Quality

Monitoring of air quality shall be the responsibility of the Contractor. All air areas affected by the construction activities shall be monitored by the Contractor.

3.1.7 Sound Intrusions

The Contractor shall keep construction activities under surveillance, and control to minimize damage to the environment by noise. The Contractor shall comply with the provisions of HIDOH, Chapter 43.

3.2 POST CONSTRUCTION CLEANUP

The Contractor shall clean up area(s) used for construction.

3.3 RESTORATION OF LANDSCAPE DAMAGE

The Contractor shall restore all landscape features damaged or destroyed during construction operations outside the limits of the approved work areas. Such restoration shall be in accordance with the plan submitted for approval by the Contracting Officer. This work will be accomplished at the Contractor's expense.

3.4 MAINTENANCE OF POLLUTION CONTROL FACILITIES

The Contractor shall maintain all constructed facilities and portable pollution control devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

3.5 TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL

The Contractor shall train his personnel in all phases of environmental protection. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of facilities (vegetative covers, and instruments required for monitoring purposes) to ensure adequate and continuous environmental pollution control.

-- End of Section --

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01451Q

CONTRACTOR QUALITY CONTROL

SECTION 01451Q

CONTRACTOR QUALITY CONTROL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 3740	(1996) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
ASTM E 329	(1995b) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO/IEC 17025	(1999) General Requirements for the Competence of Testing and Calibration Laboratories

U.S. ARMY CORPS OF ENGINEERS

EM 200-1-1	(1994) Environmental Quality - Validation of Analytical Chemical Laboratories
EM 200-1-6	(1997) Environmental Quality - Chemical Quality Assurance for Hazardous, Toxic and Radioactive Waste (HTRW) Projects
EM 1110-2-1906	(1986) Laboratory Soils Testing
ER 1110-1-261	(1999) Engineering and Design - Quality Assurance of Laboratory Testing Procedures
ER 1110-1-263	(1998) Engineering and Design - Chemical Data Quality Management for Hazardous, Toxic, Radioactive Waste Remedial Activities

1.2 DEFINITIONS

The Contractor's **Quality Control Program** shall apply to the entire contract, including individual task orders. The Contractor is responsible for quality control and shall establish and maintain an effective quality control program in compliance with the Contract Clause titled "Inspection

of Construction." The quality control program shall consist of plans, procedures, and organization necessary to produce an end product that complies with the contract requirements. The program shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence.

The Contractor shall develop and implement a Quality Control Plan that documents the methods and procedures to be used to ensure quality construction throughout the contract.

Quality control on each task order shall be governed by a **Task Order-Specific Quality Control Plan**.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Quality Control Plan; G.
Task Order-Specific Quality Control Plan; G.

1.4 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Bidding Schedule.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 GENERAL

The project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer for non-compliance with quality requirements specified in the contract and task order. The project superintendent in this context shall mean the individual with the responsibility for the overall management of the task order including quality and production.

3.2 QUALITY CONTROL PLAN

3.2.1 Contract Quality Control

The Contractor shall furnish for review by the Government, not later than 30 days after contract award, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause titled "Inspection of Construction." The plan shall identify personnel, procedures, control, instructions, test, records, and forms to be used. The Government will consider an interim plan for the first 90 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim task order-specific plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be

permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of work to be started.

3.2.2 Task Order-Specific Quality Control

The task order-specific quality control (QC) plan shall be submitted to the Contracting Officer for acceptance not later than 14 days, or an agreed to shorter period, after receipt of the task order notice to proceed. The task order-specific quality control plan shall be developed such that it applies to the specific conditions of the individual task order. Work on task orders shall not commence prior to receiving the Contracting Officer's written acceptance of both the contract Quality Control Plan and the task order-specific quality control plan.

3.2.3 Content of the CQC Plan

The CQC Plan shall include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall report to the project superintendent.

b. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters shall also be furnished to the Government.

c. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with Section 01330 SUBMITTAL PROCEDURES.

d. For all proposed QC materials testing laboratories the contractor must submit the current Certificate of Accreditation and Scope of Accreditation (Test Procedures/Methods Approved) from one of the nationally recognized accreditation authority listed in paragraph 3.7.2.2.a(1). The submitted accreditations shall include the test methods required by the Contract, and must be less than 2 years old. The contractor shall also submit proof that an audit of the laboratory was performed by an HED (or Materials Testing Center, Vicksburg, MS, MTC) Audit Team within the past 3 years, or have the laboratory audited by HED or MTC if not yet done, or if expired.

e. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.

f. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.

g. Reporting procedures, including proposed reporting formats.

3.2.4 Content of CQC Plan (For Design Build Task Order)

The CQC Plan shall include, as a minimum, the following to cover all design and construction operations, both onsite and offsite, including work by subcontractors, designers of record, consultants, architect/engineers (A/E), fabricators, suppliers, and purchasing agents:

a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the construction work specified. The staff shall include a CQC System Manager who shall report to the Project Manager or someone higher in the Contractor's organization.

b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function. Technicians responsible for sampling and testing of concrete shall be certified by the American Concrete Institute (ACI) or the Concrete Technicians Association of Hawaii (CTAH). Proof of certification shall be included in the quality control Plan. Personnel qualifications may be furnished incrementally as the work progresses, but in no case, less than fourteen (14) calendar days before personnel are required on the job.

c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters shall also be furnished to the Government.

d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, designers of record, consultants, A/E's, offsite fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with Section 01330, SUBMITTAL PROCEDURES, or Section 01012, DESIGN AFTER AWARD, as applicable.

e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test.

f. For all proposed QC materials testing laboratories the contractor must submit a current HED or MTC letter of validation.

g. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.

h. Procedures for tracking design and construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified

deficiencies have been corrected.

i. Reporting procedures, including proposed reporting formats.

j. A list of the definable features of work. A definable feature of work is a task that is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable feature under a particular section. This list will be agreed upon during the coordination meeting, but may also be developed as design progresses. Definable features must be identified prior to construction of that feature.

3.2.5 Content of the Task Order-Specific Quality Control Plan

The Task Order-Specific Quality Control Plan shall include, as a minimum, the following to cover all task order construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

a. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function. Technicians responsible for sampling and testing of concrete shall be certified by the American Concrete Institute (ACI) or the Concrete Technicians Association of Hawaii (CTAH). Proof of certification shall be included in the task specific-quality control Plan. Personnel qualifications may be furnished incrementally as the work progresses, but in no case, less than fourteen (14) calendar days before personnel are required on the job.

b. A copy of the letter to the Quality Control Representative (QCR) signed by the CQCSM which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the QCR, including authority to stop work which is not in compliance with the contract. A copy of this letter shall also be furnished to the Government.

c. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test.

d. A list of the definable features of work. A definable feature of work is a task that is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.

3.2.6 Additional Requirements for the Design Quality Control (DQC) Plan (For Design Build Task Order)

The Contractor's DQC Plan shall provide and maintain an effective quality control program which will assure that all services required by this

design-build contract are performed and provided in a manner that meets professional architectural and engineering quality standards. As a minimum, competent, independent reviewers identified in the DQC Plan shall technically review all documents. The same element that produced the product shall not perform the independent technical review (ITR). The Contractor shall correct errors and deficiencies in the design documents prior to submitting them to the Government.

The Contractor shall include the design schedule in the master project schedule, showing the sequence of events involved in carrying out the project tasks within the specific contract period. This should be at a detailed level of scheduling sufficient to identify all major design tasks, including those that control the flow of work. The schedule shall include review and correction periods associated with each item. This should be a forward planning as well as a project-monitoring tool. The schedule reflects calendar days and not dates for each activity. If the schedule is changed, the Contractor shall submit a revised schedule reflecting the change within seven (7) calendar days. The Contractor shall include in the DQC Plan the discipline-specific checklists to be used during the design and quality control of each submittal. These completed checklists shall be submitted at each design phase as part of the project documentation. Example checklists can be found in ER 1110-1-12.

A Design Quality Control Manager who has the responsibility of being cognizant of, and assuring that all documents on the project have been coordinated, shall implement the DQC Plan. This individual shall be a person who has verifiable engineering or architectural design experience and is a registered professional engineer or architect. The Contractor shall notify the Contracting Officer, in writing, of the name of the individual, and the name of an alternate person assigned to the position.

The Contracting Officer will notify the Contractor, in writing, of the acceptance of the DQC Plan. After acceptance, any changes proposed by the Contractor are subject to the acceptance of the Contracting Officer.

3.2.7 Acceptance of Plan

Acceptance of the Contractor's plans is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in his CQC Plan, task order-specific QC plan, and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.8 Acceptance of Plan (For Design Build Task Order)

Acceptance of the Contractor's plan is required prior to the start of design and/or construction. Acceptance is conditional and will be predicated on satisfactory performance during the design and construction phases. The Government reserves the right to require the Contractor to make changes in his CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.9 Notification of Changes

After acceptance of the CQC and task order-specific QC Plans, the Contractor shall notify the Contracting Officer in writing of any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.2.10 Notification of Changes (For Design Build Task Order)

After acceptance of the CQC Plan, the Contractor shall notify the Contracting Officer in writing a minimum of seven (7) calendar days prior to any of any proposed change. Proposed changes shall not be implemented prior to its acceptance by the Contracting Officer.

3.3 COORDINATION MEETINGS

After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the CQC Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control program. The CQC Plan shall be submitted for review a minimum of 7 calendar days prior to the Coordination Meeting. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting will be prepared by the Government and signed by both the Contractor and the Contracting Officer's Representative. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures that may require corrective action by the Contractor.

During the pre-work conference for each task order, the contractor and the Government will discuss the details and implementation of the task order-specific QC plan. The contractor's task order-specific QC plan shall be submitted at this meeting.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 General

The requirements for the CQC organization are a CQC System Manager (CQCSM), Quality Control Representatives (QCR), and sufficient number of additional qualified personnel to ensure contract compliance. The Contractor shall provide a QCR on each task order who shall be at the site at all times during progress of the work and with complete authority to take any action necessary to ensure compliance with the contract. All CQC staff members shall be subject to acceptance by the Contracting Officer.

3.4.2 CQC System Manager

The Contractor shall identify as CQC System Manager an individual within the onsite work organization who shall be responsible for overall management of CQC on the contract and have the authority to act in all CQC matters for the Contractor. The CQC System Manager shall be a construction person with a minimum of five (5) years experience in quality control on Department of Defense construction projects similar in size and scope to this contract. The CQC System Manager shall be employed by the prime Contractor. The CQC System Manager shall be assigned no other duties. An alternate for the CQC System Manager shall be identified in the plan to serve in the event of the System Manager's absence. The requirements for the alternate shall be the same as the designated CQC System Manager.

3.4.3 Quality Control Representative

The Contractor shall identify as Quality Control Representative (QCR) an individual within the onsite work organization who shall be responsible for management of CQC on the task order and have the authority to act in all CQC matters on the task order for the Contractor. The QCR shall be a construction person with a minimum of three (3) years experience in quality control on Department of Defense construction projects similar in size and scope to the task order. The QCR shall be on the site at all times during construction and shall be employed by the prime Contractor. The QCR shall be assigned as quality control representative, but may have duties as project superintendent in addition to quality control, unless otherwise stated in the task order. An alternate for the QCR shall be identified in the plan to serve in the event of the QCR's absence. The requirement for the alternate shall be the same as for the designated QCR.

3.4.4 CQC Personnel

In addition to CQC personnel specified elsewhere in the contract, the Contractor shall provide as part of the CQC organization specialized personnel to assist the CQC System Manager and QCR. Unless otherwise stated in the task order, these individuals, when required, may be employees of the prime or subcontractor; shall be responsible to the CQC System Manager and QCR; be physically present at the construction site during work on their areas of responsibility; have the necessary education and/or experience in accordance with the experience matrix listed herein.

Experience Matrix

Area		Qualifications
a.	Civil	Graduate Civil Engineer with 2 years experience in the type of work being performed on this project or technician with 5 yrs related experience
b.	Mechanical	Graduate Mechanical Engineer with 2 yrs experience or person with 5 yrs related experience
c.	Electrical	Graduate Electrical Engineer with 2 yrs related experience or person with 5 yrs related experience
d.	Structural	Graduate Structural Engineer with 2 yrs experience or person with 5 yrs related experience
e.	Architectural	Graduate Architect with 2 yrs experience or person with 5 yrs related experience
f.	Environmental	Graduate Environmental Engineer with 3 yrs experience
g.	Submittals	Submittal Clerk with 1 yrs

Experience Matrix

		experience
h.	Occupied family housing	Person, customer relations type, coordinator experience
i.	Concrete, Pavements and Soils	Materials Technician with 2 yrs experience for the appropriate area

If it is subsequently determined by the Contracting Officer that the minimum contract CQC requirements are not being met, the Contractor may be required to provide additional staff personnel to the CQC organization at no cost to the Government.

3.4.5 Additional Requirement

The CQC System Manager, all Quality Control Representatives, and any alternates shall have completed the course entitled "Construction Quality Management For Contractors" within the past 5 years. This course is periodically offered at the General Contractors Association of Hawaii.

3.4.6 Organizational Changes

The Contractor shall maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

3.5 SUBMITTALS

Submittals shall be made as specified in Section 01330 SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

3.6 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. The CQC System Manager or QCR shall conduct at least three phases of control for each definable feature of work as follows:

3.6.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase shall include:

a. A review of each paragraph of applicable specifications.

b. A review of the contract drawings.

c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.

d. Review of provisions that have been made to provide required

control inspection and testing.

e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.

f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.

g. A review of the appropriate activity hazard analysis to assure safety requirements are met.

h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.

i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.

j. Discussion of the initial control phase.

k. The Government shall be notified at least 2 workdays in advance of beginning the preparatory control phase for construction on Oahu. For construction in areas other than Oahu, a minimum of 7 calendar days advance notice is required. This phase shall include a meeting conducted by the QCR and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the QCR and attached to the daily CQC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.6.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

a. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.

b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.

c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.

d. Resolve all differences.

e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.

f. The Government shall be notified at least 1 workday in advance of beginning the initial phase for construction on Oahu. For construction in areas other than Oahu, a minimum of 7 calendar days advance notice is required. Separate minutes of this phase shall be prepared by the

QCR and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.

g. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work that may be affected by the deficient work. The Contractor shall not build upon nor conceal non-conforming work.

3.6.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same definable features of work if the quality of on-going work is unacceptable, if there are changes in the applicable CQC staff, onsite production supervision or work crew, if work on a definable feature is resumed after a substantial period of inactivity, or if other problems develop.

3.7 TESTS

3.7.1 Testing Procedure

The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product that conforms to contract requirements. Upon request, the Contractor shall furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and/or acceptance tests when specified. The Contractor shall obtain the services of an industry-recognized testing laboratory approved by the Honolulu Engineer District (HED), or may establish a testing laboratory at the project site acceptable to the Contracting Officer. No approved Contractor's Quality Control (CQC) laboratory may act as both CQC materials testing laboratory and the Government's Quality Assurance (QA) laboratory on the same project. Additionally, tests contractually required to be performed by an industry-recognized testing laboratory shall not be accomplished by the Contractor-established on-site laboratory.

The Contractor's testing procedures shall include the following activities and shall record and provide the following data:

a. Verify that testing procedures comply with contract requirements.

b. Verify that facilities and testing equipment are available and comply with testing standards.

c. Check test instrument calibration data against certified standards.

d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.

e. Results of all tests taken, both passing and failing tests, shall be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an offsite or commercial test facility shall be provided directly to the Contracting Officer. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

3.7.2 Testing Laboratories

3.7.2.1 Validation Requirements

Validation of QC laboratories is required to ensure that the QC laboratory is qualified to perform the tests required for this contract. Validation of a laboratory will consist of both inspection and validation audit

a. Inspection: An On-site examination of a laboratory will be performed by a Corps of Engineers audit team. The standards of acceptability are as follows:

(1) Materials Testing Laboratory: (Aggregate, Concrete, Bituminous Materials, Soil and Rock) Laboratories providing testing of these materials will be validated for compliance with ASTM E 329, ASTM D 3740, Engineer Manual EM 1110-2-1906, or project specifications, as applicable.

The QC testing laboratory performing the actual testing on the project must be accredited by one of the following laboratory accreditation authorities:

ICBO Evaluation Service, Inc. (ICBO ES)
Cement and Concrete Reference Laboratory (CCRL)
American Assoc. of State Highway & Transportation Officials (AASHTO)
National Voluntary Laboratory Accreditation Program (NVLAP)
American Association for Laboratory Accreditation (A2LA)
Materials Testing Center (MTC)-USACE Waterways Experiment Station (WES)

(2) Materials Testing Laboratory: (Steel and Other Construction Materials) Laboratories providing testing of these materials will be validated to ensure capability to perform tests required for project specifications and for compliance with ASTM E 329.

(3) Water Quality Laboratory: Laboratories engaged in routine (non-hazardous) analysis of water, wastewater, sludge, sediment, and other samples for chemical analysis will be inspected to ensure capability to perform analyses and have quality control procedures, as described in ER 1110-1-261 as appropriate. State and municipal certified laboratories performing these tests will be accepted. The use of analytical methods for procedures not addressed in ER 1110-1-261 will be evaluated by USACE Chemistry Quality Assurance Branch (CQAB), Omaha, Nebraska for conformance with project or program requirements.

(4) HTRW/Environmental Laboratory: Chemical quality assurance is required to ensure analytical data generated for this project meet high quality data satisfying the project specific data quality objectives, in accordance with ER 1110-1-263 and EM 200-1-6. Analytical laboratories within the 50 United State of America and its territories are required to obtain a USACE (Corps of Engineers) laboratory validation prior to start of field work or sample analyses and maintain the validation status throughout the response activities as outlined in EM 200-1-1, and at least every two years thereafter. Outside these areas, the analytical laboratory shall be certified to meet or exceed ISO/IEC 17025 requirements and be acceptable to the Contracting Officer, and in accordance to the current HED written policies and procedures establishing the validation method and certification period.

b. Validation Audit and Process: Validation is the process that HED uses to verify that the laboratory is qualified to perform required test procedures in this contract. A laboratory may be validated by auditing if it has been accredited by one of the accrediting agencies listed above within the past two years in accordance with ASTM E 329. The audit will be performed by either HED or MTC as follows:

(1) Auditing by HED: Provided a Hawaii laboratory has a current certification from one of the agencies listed in paragraph 3.7.2.2.a(1), a validation is obtained by an on-site laboratory validation inspection by the HED Audit Team for materials laboratories testing aggregate, cement, concrete, bituminous materials, soil and rock. There is no cost for this HED audit validation but allow a minimum 14 days advance notice for scheduling purposes.

Point of contact for obtaining a HED validation audit is:
(I) Harley D. Rowe, (808) 438-1355, or
(II) Raymond W. Kong, (808) 438-6953

at the following address:
U.S. Army Corps of Engineers
Bldg. 230, ATTN: CEPOH-EC-CQ
Ft. Shafter, Hawaii 96858-5440

For materials laboratories testing other than those listed in 3.7.2.2.a(1), the Contractor's laboratory must meet the requirements specified, subject to review and acceptance by the Government.

(2) Auditing or Inspection by MTC: If a validated laboratory is unavailable or the Contractor desires to use a laboratory that has not been previously validated that doesn't qualify under the requirements of paragraph 3.7.2.2.b, Contractor shall coordinate with the Corps of Engineers Material Testing Center (MTC) to obtain validation and must pay all associated costs. Inspection by MTC may be required after auditing if one or more of the critical testing procedures required by the project specification were not included in the agency inspection report or if there is any concern that the laboratory may not be able to provide required services. The Contractor is cautioned that the validation process is complicated and lengthy, requires an onsite inspection by MTC staff, correction of identified deficiencies, and the submittal

and approval of significant documentation. Estimate a minimum of 60 days to schedule an inspection and receive validation. Cost of onsite inspections is $2500 plus travel time and expenses from Vicksburg MS. Cost of audit is $1500. If an onsite inspection is required following an audit, the cost of the inspection will be $1500 plus travel time and expenses. The Contractor will be invoiced for actual travel costs and shall submit payment directly to the MTC made payable to the ERDC Finance and Accounting Officer prior to the scheduling of the inspection and/or audit. Costs are subject to change. For current costs, and obtaining inspection/audit request forms, access the MTC web site: http://www.wes.army.mil/SL/MTC/mtc.htm

Point of contact at MTC is:
Daniel Leavell, telephone (601) 634-2496,
fax (601) 634-4656,
email: daniel.a.leavell@erdc.usace.army.mil
Address:
U.S. Army Corps of Engineers
Materials Testing Center
Waterways Experiment Station
3909 Hall Ferry Road
Vicksburg, MS 39180-6199

The Contractor shall furnish the Contracting Officer with a copy of all correspondence and submittals to the MTC for purposes of laboratory validation.

c. Validation Requirements

(1) An initial validation by HED must be performed prior to performance of testing and at least every three (3) years thereafter of all laboratories used by the contractor for testing aggregate, concrete, bituminous materials, soils, rock, and other construction materials,

(2) Laboratories performing water quality, wastewater, sludge, and sediment testing must be validated at least every eighteen (18) months.

(3) Any laboratory may be revalidated at any time at the discretion of the Corps of Engineers when conditions are judged to differ substantially from the conditions when last validated.

3.7.2.2 Capability Check

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329.

3.7.2.3 Capability Recheck

If the selected laboratory fails the capability check, the Contractor shall reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the contract amount due the Contractor.

3.7.3 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make quality assurance tests and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

3.7.4 Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials shall be borne by the Contractor. *Samples of materials for test verification and acceptance testing by the Government shall be delivered to a testing laboratory on the Island of Oahu, State of Hawaii, designated by the Contracting Officer. Coordination for each specific test, exact delivery location, and dates will be made through the Government field office.

3.8 COMPLETION INSPECTION

3.8.1 Punch-Out Inspection

Near the completion of all work or any increment thereof established by a completion time stated in the Special Clause entitled "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the CQC System Manager shall conduct an inspection of the work and develop a punch list of items which do not conform to the approved drawings and specifications. Such a list of deficiencies shall be included in the CQC documentation, as required by paragraph DOCUMENTATION below, and shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager, QCR, or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Government that the facility is ready for the Government Pre-Final inspection.

3.8.2 Pre-Final Inspection

The Government will perform this inspection to verify that the facility is complete and ready to be occupied. The QCR shall develop a punch list of items that do not conform to the contract documents. The Government will review the punch list and add to or correct the items listed. The QCR shall incorporate Government comments and provide a Pre-Final Punch List. The Contractor's CQC System Manager or QCR shall ensure that all items on this list have been corrected before notifying the Government to schedule a Final inspection with the customer. Any items noted on the Pre-Final inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or any particular increment thereof if the project is divided into increments by separate completion dates.

3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative shall be in attendance at this inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil Facility Engineer user groups, and major commands may also be in attendance. The Contractor shall notify the Contracting Officer at least 14 days prior to the proposed final acceptance inspection and

shall include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work to be performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause titled "Inspection of Construction".

3.9 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed on each task order. These records shall include the work of subcontractors and suppliers and shall be prepared using government-provided software, QCS (see Section 01312), that includes, as a minimum, the following information:

a. Contractor/subcontractor and their area of responsibility.

b. Operating plant/equipment with hours worked, idle, or down for repair.

c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.

d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase should be identified (Preparatory, Initial, Follow-up). List deficiencies noted along with corrective action.

e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.

f. Submittals reviewed, with contract reference, by whom, and action taken.

g. Off-site surveillance activities, including actions taken.

h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.

i. Instructions given/received and conflicts in plans and/or specifications.

j. Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. Unless otherwise directed by the Contracting Officer the original and one copy of these records in report form shall be furnished to the Government daily within 24 hours after the date covered by the report, except that reports need not be submitted for

days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager or QCR. The report from the CQC System Manager or QCR shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01670

RECYCLED / RECOVERED MATERIALS

-- End of Section Table of Contents --

SECTION 01670

RECYCLED / RECOVERED MATERIALS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

40 CFR 247	Comprehensive Procurement Guideline for Products Containing Recovered Materials

1.2 OBJECTIVES

Government procurement policy is to acquire, in a cost effective manner, items containing the highest percentage of recycled and recovered materials practicable consistent with maintaining a satisfactory level of competition without adversely affecting performance requirements or exposing suppliers' employees to undue hazards from the recovered materials. The Environmental Protection Agency (EPA) has designated certain items which must contain a specified percent range of recovered or recycled materials. EPA designated products specified in this contract comply with the stated policy and with the EPA guidelines. The Contractor shall make all reasonable efforts to use recycled and recovered materials in providing the EPA designated products and in otherwise utilizing recycled and recovered materials in the execution of the work.

1.3 EPA DESIGNATED ITEMS INCORPORATED IN THE WORK

Various sections of the specifications contain requirements for materials that have been designated by EPA as being products which are or can be made with recovered or recycled materials. These items, when incorporated into the work under this contract, shall contain at least the specified percentage of recycled or recovered materials unless adequate justification (non-availability) for non-use is provided. When a designated item is specified as an option to a non-designated item, the designated item requirements apply only if the designated item is used in the work.

1.4 EPA PROPOSED ITEMS INCORPORATED IN THE WORK

Products other than those designated by EPA are still being researched and are being considered for future Comprehensive Procurement Guideline (CPG) designation. It is recommended that these items, when incorporated in the work under this contract, contain the highest practicable percentage of recycled or recovered materials, provided specified requirements are also met.

1.5 EPA LISTED ITEMS USED IN CONDUCT OF THE WORK BUT NOT INCORPORATED IN

THE WORK

There are many products listed in 40 CFR 247 which have been designated or proposed by EPA to include recycled or recovered materials that may be used by the Contractor in performing the work but will not be incorporated into the work. These products include office products, temporary traffic control products, and pallets. It is recommended that these non-construction products, when used in the conduct of the work, contain the highest practicable percentage of recycled or recovered materials and that these products be recycled when no longer needed.

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01780

CLOSEOUT SUBMITTALS

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SECTION 01780

CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

As-Built Drawings.

Drawings showing final as-built conditions of the project. The final CADD as-built drawings shall consist of three sets of electronic CADD drawing files in the specified format, one set of original drawings, three sets of prints of the originals, and one set of the Government accepted working as-built drawings.

SD-03 Product Data

As-Built Record of Equipment and Materials.

Two copies of the record listing the as-built materials and equipment incorporated into the construction of the project.

Warranty Management Plan.

One set of the warranty management plan containing information relevant to the warranty of materials and equipment incorporated into the construction project, including the starting date of warranty of construction. The Contractor shall furnish with each warranty the name, address, and telephone number of each of the guarantor's representatives nearest to the project location.

Warranty Tags.

Two record copies of the warranty tags showing the layout and design.

Final Clean-Up.

Two copies of the listing of completed final clean-up items.

1.2 PROJECT RECORD DOCUMENTS

1.2.1 As-Built Drawings

This paragraph covers as-built drawings complete, as a requirement of the

contract. The terms "drawings," "contract drawings," "drawing files," "working as-built drawings" and "final as-built drawings" refer to contract drawings which are revised to be used for final as-built drawings.

1.2.1.1 Government Furnished Materials

One set of electronic CADD files in the specified software and format revised to reflect all bid amendments will be provided by the Government at the preconstruction conference for projects requiring CADD file as-built drawings.

1.2.1.2 Working As-Built and Final As-Built Drawings

The Contractor shall maintain 2 sets of paper drawings by red-line process to show the as-built conditions during the prosecution of the project. These working as-built marked drawings shall be kept current on a daily basis and at least one set shall be available on the jobsite at all times. Changes from the contract plans which are made in the work or additional information which might be uncovered in the course of construction shall be accurately and neatly recorded as they occur by means of details and notes. At the final inspection or upon beneficial occupancy of the facility by the user, whichever comes first. The Contractor shall provide one of the two sets of working as-built drawings to the COR for turnover with the facility. This set will serve as an advance/interim working set for the occupant of the completed facility; until such time that the final as-built drawings are furnished to them. Final as-built drawings shall be prepared after the completion of each definable feature of work as listed in the Contractor Quality Control Plan (Foundations, Utilities, Structural Steel, etc., as appropriate for the project). The working as-built marked drawings and final as-built drawings will be jointly reviewed for accuracy and completeness by the Contracting Officer and the Contractor prior to submission of each monthly pay estimate. If the Contractor fails to maintain the working and final as-built drawings as specified herein, the Contracting Officer will deduct from the monthly progress payment an amount representing the estimated cost of maintaining the as-built drawings. This monthly deduction will continue until an agreement is reached between the Contracting Officer and the Contractor regarding the accuracy and completeness of updated drawings. The working and final as-built drawings shall show, but shall not be limited to, the following information:

a. The actual location, kinds and sizes of all sub-surface utility lines. In order that the location of these lines and appurtenances may be determined in the event the surface openings or indicators become covered over or obscured, the as-built drawings shall show, by offset dimensions to two permanently fixed surface features, the end of each run including each change in direction. Valves, splice boxes and similar appurtenances shall be located by dimensioning along the utility run from a reference point. The average depth below the surface of each run shall also be recorded.

b. The location and dimensions of any changes within the building structure.

c. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.

d. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor; including but not limited to fabrication, erection,

installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.

e. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.

f. Changes or modifications which result from the final inspection.

g. Where contract drawings or specifications present options, only the option selected for construction shall be shown on the final as-built drawings.

h. If borrow material for this project is from sources on Government property, or if Government property is used as a spoil area, the Contractor shall furnish a contour map of the final borrow pit/spoil area elevations.

i. Systems designed or enhanced by the Contractor, such as HVAC controls, fire alarm, fire sprinkler, and irrigation systems.

j. Modifications (change order price shall include the Contractor's cost to change working and final as-built drawings to reflect modifications) and compliance with the following procedures.

(1) Directions in the modification for posting descriptive changes shall be followed.

(2) A Modification Circle shall be placed at the location of each deletion.

(3) For new details or sections which are added to a drawing, a Modification Circle shall be placed by the detail or section title.

(4) For minor changes, a Modification Circle shall be placed by the area changed on the drawing (each location).

(5) For major changes to a drawing, a Modification Circle shall be placed by the title of the affected plan, section, or detail at each location.

(6) For changes to schedules or drawings, a Modification Circle shall be placed either by the schedule heading or by the change in the schedule.

(7) The Modification Circle size shall be 1/2 inch diameter unless the area where the circle is to be placed is crowded. Smaller size circle shall be used for crowded areas.

1.2.1.3 Drawing Preparation

The as-built drawings shall be modified as may be necessary to correctly show the features of the project as it has been constructed by bringing the contract set into agreement with Government accepted working as-built drawings, and adding such additional drawings as may be necessary. These working as-built marked drawings shall be neat, legible and accurate. These drawings are part of the permanent records of this project and shall be returned by the Contractor to the Contracting Officer after final acceptance by the Government. Any drawings damaged or lost by the Contractor shall be satisfactorily replaced by the Contractor at no expense to the Government.

1.2.1.4 Computer Aided Design and Drafting (CADD) Drawings

Only personnel proficient in the preparation of microstation CADD drawings shall be employed to modify the contract drawings or prepare additional new drawings. Additions and corrections to the contract drawings shall be equal in quality and detail to that of the originals. Line colors, line weights, lettering, layering conventions, and symbols shall be the same as the original line colors, line weights, lettering, layering conventions, and symbols. If additional drawings are required, they shall be prepared using the specified electronic file format applying the same graphic standards specified for original drawings. The title block and drawing border to be used for any new final as-built drawings shall be identical to that used on the contract drawings. Additions and corrections to the contract drawings shall be accomplished using CADD files. The Contractor will be furnished Microstation CADD files and pentable. The electronic files will be supplied on compact disc, read-only memory (CD-ROM). The Contractor shall be responsible for providing all program files and hardware necessary to prepare final as-built drawings. The Contracting Officer will review final as-built drawings for accuracy and the Contractor shall make required corrections, changes, additions, and deletions.

a. CADD colors shall be the "base" colors of red, green, and blue. Color code for changes shall be as follows:

(1) Deletions (red) - Deleted graphic items (lines) shall be colored red with red lettering in notes and leaders.

(2) Additions (Green) - Added items shall be drawn in green with green lettering in notes and leaders.

(3) Special (Blue) - Items requiring special information, coordination, or special detailing or detailing notes shall be in blue.

b. All changes to the contract drawing files shall be made on the level as the original item. There shall be no deletions of existing lines; existing lines shall be over struck in red. Additions shall be in green with line weights the same as the drawing.

c. When final revisions have been completed, the cover sheet drawing shall show the wording "RECORD DRAWING AS-BUILT" followed by the name of the Contractor in letters at least 3/16 inch high. All other contract drawings shall be marked either "as-built" drawing denoting no revisions on the sheet or "Revised As-Built" denoting one or more revisions. Original contract drawings shall be dated in the revision block.

d. Within 10 days after Government acceptance of all of the working as-built drawings for a phase of work, the Contractor shall prepare the final CADD as-built drawings for that phase of work and submit two sets of blue/black-line prints of these drawings for Government review. The Government will promptly return one set of prints annotated with any necessary corrections. Within 10 days the Contractor shall revise the CADD files accordingly at no additional cost and submit one set of final prints for the completed phase of work to the Government. Within 10 days of substantial completion of all phases of work, the Contractor shall submit the final as-built drawing package for the entire project. The submittal shall consist of three sets of electronic files on compact disc, read-only memory (CD-ROM), one set of originals, three sets of prints and one set of

the Government annotated and accepted working as-built drawings. They shall be complete in all details and identical in form and function to the contract drawing files supplied by the Government. Any transactions or adjustments necessary to accomplish this is the responsibility of the Contractor. The Government reserves the right to reject any drawing files it deems incompatible with the customer's CADD system. Paper prints, drawing files and storage media submitted will become the property of the Government upon final acceptance. Failure to submit final as-built drawing files or working as-built marked drawings as specified shall be cause for withholding any payment due the Contractor under this contract. Acceptance of final as-built drawings shall be accomplished before final payment is made to the Contractor.

1.2.1.5 Payment

No separate payment will be made for as-built drawings required under this contract, and all costs accrued in connection with such drawings shall be considered a subsidiary obligation of the Contractor.

1.2.2 As-Built Record of Equipment and Materials

The Contractor shall furnish one copy of preliminary record of equipment and materials used on the project 15 days prior to final inspection. This preliminary submittal will be reviewed and returned 2 days after final inspection with Government comments. Two sets of final record of equipment and materials shall be submitted 10 days after final inspection. The designations shall be keyed to the related area depicted on the contract drawings. The record shall list the following data:

RECORD OF DESIGNATED EQUIPMENT AND MATERIALS DATA

Description	Specification Section	Manufacturer and Catalog, Model, and Serial Number	Composition and Size	Where Used

1.2.3 Final Approved Shop Drawings

The Contractor shall furnish final approved project shop drawings 30 days after transfer of the completed facility.

1.2.4 Real Property Equipment

The Contractor shall furnish a list of installed equipment furnished under this contract. The list shall include all information usually listed on manufacturer's name plate. The "EQUIPMENT-IN-PLACE LIST" shall include, as applicable, the following for each piece of equipment installed: description of item, location (by room number), model number, serial number, capacity, name and address of manufacturer, name and address of equipment supplier, condition, spare parts list, manufacturer's catalog, and warranty. A draft list shall be furnished at time of transfer. The final list shall be furnished 30 days after transfer of the completed facility.

1.3 WARRANTY MANAGEMENT

1.3.1 Warranty Management Plan

The Contractor shall develop a warranty management plan. At least 30 days

before the planned pre-warranty conference, the Contractor shall submit the warranty management plan for Government approval. The warranty management plan shall include all required actions and documents to assure that the Government receives all warranties to which it is entitled, in accordance with the Contract Clause, WARRANTY OF CONSTRUCTION. The plan shall be in narrative form and contain sufficient detail to render it suitable for use by future maintenance and repair personnel, whether tradesmen, or of engineering background, not necessarily familiar with this contract. The term "status" as indicated below shall include due date and whether item has been submitted or was accomplished. Warranty information made available during the construction phase shall be submitted to the Contracting Officer for approval prior to each monthly pay estimate. Approved information shall be assembled in a binder and shall be turned over to the Government upon acceptance of the work. The construction warranty period shall begin on the date of project acceptance and shall continue for the full product warranty period. A joint 4 month and 9 month warranty inspection shall be conducted, measured from time of acceptance, by the Contractor, Contracting Officer and the Customer Representative. Information contained in the warranty management plan shall include, but shall not be limited to, the following:

a. Roles and responsibilities of all personnel associated with the warranty process, including points of contact and telephone numbers within the organizations of the Contractors, subcontractors, manufacturers or suppliers involved.

b. Listing and status of delivery of all Certificates of Warranty for extended warranty items, to include roofs, HVAC balancing, pumps, motors, transformers, and for all commissioned systems such as fire protection and alarm systems, sprinkler systems, lightning protection systems, etc.

c. A list for each warranted equipment, item, feature of construction or system indicating:

1. Name of item.
2. Model and serial numbers.
3. Location where installed.
4. Name and phone numbers of manufacturers or suppliers.
5. Names, addresses and telephone numbers of sources of spare parts.
6. Warranties and terms of warranty. This shall include one-year overall warranty of construction. Items which have extended warranties shall be indicated with separate warranty expiration dates.
7. Cross-reference to warranty certificates as applicable.
8. Starting point and duration of warranty period.
9. Summary of maintenance procedures required to continue the warranty in force.
10. Cross-reference to specific pertinent Operation and Maintenance manuals.
11. Organization, names and phone numbers of persons to call for warranty service.
12. Typical response time and repair time expected for various warranted equipment.

d. The Contractor's plans for attendance at the 4 and 9 month post-construction warranty inspections conducted by the Government.

e. Procedure and status of tagging of all equipment covered by

extended warranties.

f. Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

1.3.2 Performance Bond

The Contractor's Performance Bond shall remain in effect throughout the construction period, and during the life of any guaranty required under the Contract Performance Bond, Standard Form 25.

a. In the event the Contractor fails to commence and diligently pursue any construction warranty work required, the Contracting Officer will have the work performed by others. After completion of the construction warranty work, charges will be made to the remaining construction warranty funds of expenses which the Government incurred while performing the work, including, but not limited to administrative expenses.

b. In the event sufficient funds are not available to cover the construction warranty work performed by the Government, at the Contractor's expense, the Contracting Officer will have the right to recoup expenses from the bonding company.

c. Following oral or written notification of required construction warranty repair work, the Contractor shall respond in a timely manner. Written verification will follow oral instructions. Failure of the Contractor to respond will be cause for the Contracting Officer to proceed against the Contractor.

1.3.3 Pre-Warranty Conference

Prior to contract completion, and at a time designated by the Contracting Officer, the Contractor shall meet with the Contracting Officer to develop a mutual understanding with respect to the requirements of this section. Communication procedures for Contractor notification of construction warranty defects, priorities with respect to the type of defect, reasonable time required for Contractor response, and other details deemed necessary by the Contracting Officer for the execution of the construction warranty shall be established/reviewed at this meeting. In connection with these requirements and at the time of the Contractor's quality control completion inspection, the Contractor shall furnish the name, telephone number and address of a licensed and bonded company which is authorized to initiate and pursue construction warranty work action on behalf of the Contractor. This point of contact will be located within the local service area of the warranted construction, shall be continuously available, and shall be responsive to Government inquiry on warranty work action and status. This requirement does not relieve the Contractor of any of its responsibilities in connection with other portions of this provision.

1.3.4 Contractor's Response to Construction Warranty Service Requirements

Following oral or written notification by the Contracting Officer, the Contractor shall respond to construction warranty service requirements in accordance with the "Construction Warranty Service Priority List" and the three categories of priorities listed below. The Contractor shall submit a report on any warranty item that has been repaired during the warranty period. The report shall include the cause of the problem, date reported, corrective action taken, and when the repair was completed. If the Contractor does not perform the construction warranty within the timeframes

specified, the Government will perform the work and backcharge the construction warranty payment item established.

a. First Priority Code 1. Perform onsite inspection to evaluate situation, and determine course of action within 4 hours, initiate work within 6 hours and work continuously to completion or relief.

b. Second Priority Code 2. Perform onsite inspection to evaluate situation, and determine course of action within 8 hours, initiate work within 24 hours and work continuously to completion or relief.

c. Third Priority Code 3. All other work to be initiated within 3 work days and work continuously to completion or relief.

d. The "Construction Warranty Service Priority List" is as follows:

Code 1-Air Conditioning Systems
(1) Recreational support.
(2) Air conditioning leak in part of building, if causing damage.
(3) Air conditioning system not cooling properly.

Code 1-Doors
(1) Overhead doors not operational, causing a security, fire, or safety problem.
(2) Interior, exterior personnel doors or hardware, not functioning properly, causing a security, fire, or safety problem.

Code 3-Doors
(1) Overhead doors not operational.
(2) Interior/exterior personnel doors or hardware not functioning properly.

Code 1-Electrical
(1) Power failure (entire area or any building operational after 1600 hours).
(2) Security lights
(3) Smoke detectors

Code 2-Electrical
(1) Power failure (no power to a room or part of building).
(2) Receptacle and lights (in a room or part of building).

Code 3-Electrical
Street lights.

Code 1-Gas
(1) Leaks and breaks.
(2) No gas to family housing unit or cantonment area.

Code 1-Heat
(1) Area power failure affecting heat.
(2) Heater in unit not working.

Code 2-Kitchen Equipment
(1) Dishwasher not operating properly.
(2) All other equipment hampering preparation of a meal.

Code 1-Plumbing
(1) Hot water heater failure.

(2) Leaking water supply pipes.

Code 2-Plumbing
(1) Flush valves not operating properly.
(2) Fixture drain, supply line to commode, or any water pipe leaking.
(3) Commode leaking at base.

Code 3 -Plumbing
Leaky faucets.

Code 3-Interior
(1) Floors damaged.
(2) Paint chipping or peeling.
(3) Casework.

Code 1-Roof Leaks
Temporary repairs will be made where major damage to property is occurring.

Code 2-Roof Leaks
Where major damage to property is not occurring, check for location of leak during rain and complete repairs on a Code 2 basis.

Code 2-Water (Exterior)
No water to facility.

Code 2-Water (Hot)
No hot water in portion of building listed.

Code 3-All other work not listed above.

1.3.5 Warranty Tags

At the time of installation, each warranted item shall be tagged with a durable, oil and water resistant tag approved by the Contracting Officer. Each tag shall be attached with a copper wire and shall be sprayed with a silicone waterproof coating. The date of acceptance and the QC signature shall remain blank until project is accepted for beneficial occupancy. The tag shall show the following information.

a. Type of product/material_____.

b. Model number_____.

c. Serial number_____.

d. Contract number_____.

e. Warranty period_____from_____to_____.

f. Inspector's signature_____.

g. Construction Contractor_____.

Address_____.

Telephone number_____.

h. Warranty contact_____.

Address_____.

Telephone number_____.

i. Warranty response time priority code_____.

j. WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.

1.4 MECHANICAL TESTING, ADJUSTING, BALANCING, AND COMMISSIONING

Prior to final inspection and transfer of the completed facility; all reports, statements, certificates, and completed checklists for testing, adjusting, balancing, and commissioning of mechanical systems shall be submitted to and approved by the Contracting Officer as specified in applicable technical specification sections.

1.5 OPERATION AND MAINTENANCE MANUALS

Operation manuals and maintenance manuals shall be submitted as specified. Operation manuals and maintenance manuals provided in a common volume shall be clearly differentiated and shall be separately indexed.

1.6 FINAL CLEANING

The premises shall be left broom clean. Stains, foreign substances, and temporary labels shall be removed from surfaces. Carpet and soft surfaces shall be vacuumed. Equipment and fixtures shall be cleaned to a sanitary condition. Filters of operating equipment shall be cleaned. Debris shall be removed from roofs, drainage systems, gutters, and downspouts. Paved areas shall be swept and landscaped areas shall be raked clean. The site shall have waste, surplus materials, and rubbish removed. The project area shall have temporary structures, barricades, project signs, and construction facilities removed. A list of completed clean-up items shall be submitted on the day of final inspection.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

-- End of Section --

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01900Q

MISCELLANEOUS PROVISIONS

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SECTION 01900Q

MISCELLANEOUS PROVISIONS

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 PreConstruction Submittals

Progress Chart; G.

The Contractor shall prepare and submit for approval by the Contracting Officer a progress chart in accordance with the CONTRACT CLAUSE entitled "SCHEDULE FOR CONSTRUCTION CONTRACTS" twenty-one (21) calendar days prior to initiation of any work. Any material change to the progress chart must be approved in writing in advance by the Contracting Officer.

Any proposed changes to the approved schedule shall be requested by the Contractor in writing a minimum of fourteen (14) calendar days prior to the proposed start of work.

Accident Prevention Plan

Activity Hazard Analyses; G.

SD-02 Shop Drawings

As-Built Drawings

SD-03 Product Data

Equipment Data.

A list of all equipment furnished under this contract. This list shall include, but not be limited to, each piece of equipment with a serial number, and shall include all information shown on the manufacturer's nameplate, so as to positively identify the piece of equipment. This list shall also include the cost of each piece of equipment (less installation costs) F.O.B. construction site. This list shall be furnished as soon as possible after equipment is purchased. The list shall consist of one (1) reproducible and three (3) copies, and shall be furnished to the Contracting Officer not later than thirty (30) calendar days prior to completion of any segment of the contract work which has an incremental completion date.

Recovered Material Report

The Contractor shall provide a report listing all products meeting EPA guidelines for products containing recovered materials and quantity used for this project.

SD-06 Test Reports

Inspection of Existing Conditions.

A written report with color photographs noting the condition of the existing facilities at the time of the inspection. One copy of the report including photographs shall be submitted to the Contracting Officer, prior to construction.

SD-06 Test Records

Dust Control; G.

Method(s) of dust control.

Excavation/Trenching Clearance.

Prior to start of any excavation or trenching work, the Contractor shall obtain clearance, in writing, from the appropriate communications agency and base or area engineer. Copies of all correspondence shall be provided the Contracting Officer. Normal coordination time for obtaining the necessary permits is approximately fifteen (15) calendar days. The Contractor shall advise the Contracting Officer promptly when it appears that the normal coordination time will be exceeded.

Condition of Contractor's Operation or Storage Area.

The Contractor shall submit to the Contracting Officer photographs and/or videos depicting the condition of the Contractor's Operation or Storage Area.

SD-07 Certificate

Products Containing Recovered Materials.

The Contractor shall submit manufacturer's certification attesting that product meets or exceeds EPA's recovered material guidelines.

1.2 CONTRACTOR QUALITY CONTROL

To assure compliance with contract requirements, the Contractor shall establish and maintain quality control for materials and work covered by all sections of the TECHNICAL REQUIREMENTS in accordance with Section 01451Q CONTRACTOR QUALITY CONTROL. Records shall be maintained for all operations including sampling and testing.

1.3 Safety

1.3.1 General

Site activities performed in conjunction with this contract may pose safety

hazards that require specialized expertise to effectively address and eliminate. The Contractor shall be responsible for preparing and implementing an effective safety and health program throughout the entire duration of the contract.

1.3.2 Accident Prevention Plan

The contractor shall prepare an Accident Prevention Plan in accordance with the provisions of FAR 52.236-13 (Section 00700) and Section 00800, paragraph S-36.18. The Accident Prevention Plan shall address the contractor's overall safety program for the entire contract. The APP shall consist of the forms and documents listed in Section 00800, S36.18, ACCIDENT PREVENTION PLAN, covering the overall safety considerations for the contract as a whole.

1.3.3 Site-Specific Safety and Health Plan (SSHP)

The contractor shall prepare a site-specific safety and health plan addressing the safety aspects specific to the work ordered. Work on a feature of work shall not commence prior to receiving the Contracting Officer's written acceptance of both the contract Accident Prevention Plan and the site-specific safety and health plan.

The SSHP shall be prepared in accordance with the requirements specified in this section and shall comply with all federal, state, and local health and safety requirements, e.g., the Occupational Safety and Health Administration (OSHA) requirements (29 CFR 1910 and 1926) and the U.S. Army Corps of Engineers Safety and Health Requirements Manual (EM 385-1-1). The SSHP shall address those elements that are specific to the feature of work that have potential for negative effects on the safety and health of workers, the public, and other personnel on site.

An Activity Hazard Analysis (AHA), POD Form 184-R, rev 16 Oct 98, shall be submitted for all phases of construction specific to the feature of work and worksite. Work on a construction phase cannot begin until the AHA is submitted and accepted.

The SSHP shall identify the individual responsible for jobsite safety. This individual shall be present at the jobsite at all times during construction. Copies of the accepted SSHP and Accident Prevention Plan shall be available at the jobsite at all times. All workers shall know the location of these plans. All workers shall receive a safety briefing covering applicable sections of these plans prior to the start of construction.

Daily safety and health inspections shall be conducted to determine if site operations are conducted in accordance with the accepted SSHP and contract requirements. Results and observations made during these inspections shall be noted in the contractor's daily report.

1.3.4 Safety and Health Manager

The Safety and Health Manager shall have direct responsibility for the overall management of the contractor's Safety Program for the entire contract, as required by the US Army Corps of Engineers Safety and Health Requirements Manual, EM385-1-1, and other applicable safety standards. This individual shall have a minimum of five (5) years experience in safety on Department of Defense construction projects similar in size and scope to this contract. All members of the safety staff are subject to review and

acceptance by the Contracting Officer. The Safety and Health Manager shall have no other duties.

1.4 AS-BUILT DRAWINGS

As-built drawings shall be in accordance with Section 01780 CLOSEOUT SUBMITTALS.

1.5 DUST CONTROL

The amount of dust resulting from the Contractor's work shall be controlled to prevent the spread of dust to occupied portions of the construction site and to avoid creation of a nuisance in the surrounding area. Use of water will not be permitted when it will result in, or create, hazardous or objectionable conditions such as flooding and pollution. Measures shall also be taken for dust control along haul routes and equipment parking areas.

1.6 PROTECTION

The Contractor shall take all necessary precautions to insure that no damages to private or public property will result from his operations. Any such damages shall be repaired or property replaced by the Contractor in accordance with the CONTRACT CLAUSES entitled "PERMITS AND RESPONSIBILITIES" and "PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS", without delay, and at no cost to the Government.

1.6.1 Warning Signs and Barricades

The Contractor shall be responsible for posting warning signs or erecting temporary barricades to provide for safe conduct of work and protection of property.

1.6.2 Protection of Grassed and Landscaped Areas

The Contractor's vehicles shall be restricted to paved roadways and driveways. Vehicles shall not be driven or parked on grassed and/or landscaped areas except when absolutely necessary for the performance of the work and approved in advance by the Contracting Officer. Grassed or landscaped areas damaged by the Contractor shall be restored to their original condition without delay and at no cost to the Government.

1.6.3 Protection of Trees and Plants

Where necessary, tree branches and plants interfering with the work may be temporarily tied back by the Contractor to permit accomplishment of the work in a convenient manner, so long as they will not be permanently damaged thereby. If this is not feasible, they may be pruned, subject to written approval by the Contracting Officer.

1.6.4 Protection of Building From the Weather

The interior of the building and all materials and equipment shall be protected from the weather at all times.

1.7 RESTORATION WORK

Existing conditions or areas damaged or disturbed by the Contractor's

operations shall be restored to their original condition, or near original condition as possible, to the satisfaction of the Contracting Officer.

1.8 REMOVAL AND DISPOSAL

Removal and disposal shall be in accordance with Section 02220 DEMOLITION.

1.8.1 Title to Materials

Title to all materials and equipment to be removed, except as indicated or specified otherwise, is vested in the Contractor upon receipt of notice to proceed. The Government will not be responsible for the condition, loss or damage to such property after the Contractor's receipt of notice to proceed. Items indicated to be removed shall be removed and disposed of by the Contractor outside the limits of Government-controlled property at the Contractor's responsibility and expense before the completion and final acceptance of the work, and such materials shall not be sold on the site.

1.8.2 Rubbish and Debris

Rubbish and debris shall be removed from Government-controlled property daily unless otherwise directed, so as not to allow accumulation. Materials that cannot be removed daily shall be stored in areas designated by the Contracting Officer.

1.9 INTERFERENCE WITH GOVERNMENT OPERATIONS

The Contractor shall establish work procedures and methods to prevent interference with existing operations within or adjacent to the construction area. Free passage into adjoining or adjacent buildings not in the contract will not be permitted except as approved by the Contracting Officer. Procedures and methods shall also provide for safe conduct of work and protection of property which is to remain undisturbed.

1.9.1 Coordination

The Contractor shall coordinate all work with the Contracting Officer to minimize interruption and inconvenience to the occupants or to the Government. Scheduling and programming of work will be established during the pre-construction conference.

1.9.2 Utilities and Facilities

All utilities and facilities within the area shall remain operable and shall not be affected by the Contractor's work, unless otherwise approved in writing in advance by the Contracting Officer.

1.9.3 Staking and Flagging Existing Utilities

The Contractor, prior to start of any excavation or trenching work, shall verify the location of all utility lines shown on the drawings which are within the areas of work, and shall mark, stake, or flag each utility line along trench alignments and under areas of excavation under this project, as approved. Existing utility lines shall be located by walking trench alignments with approved equipment for locating underground pipes and cables. Utility lines so located shall be noted on the drawings.

1.10 CONTRACTOR'S OPERATIONS OR STORAGE AREA

At the request of the Contractor, an open operations or storage area of the exact location of which will be determined by the Government. The Contractor shall be responsible for the security necessary for protection of his equipment and materials, and shall maintain the area free of debris. No rusty or unsightly materials shall be used for providing the secure measure and such measure shall be erected in a workmanlike manner. Before any construction commences on establishing the operation/storage area, Contractor shall take photographs and/or videos of the site in order to establish the original conditions of the site. A duplicate set shall be made and submitted to the Government for its files. Upon completion and prior to the final acceptance of the contract work, the Contractor shall restore the area to its original condition.

1.11 INSPECTION

1.11.1 Final Inspection and Acceptance

The Contractor shall give the Contracting Officer, a minimum of fourteen (14) calendar days advance notice prior to final inspection for acceptance by the Contracting Officer. All deficiencies found on final inspection shall be promptly and satisfactorily corrected by the Contractor upon notification by the Contracting Officer.

1.12 WORKING DIRECTIVES

1.12.1 Working Hours

All work shall be performed between the hours of 0730 to 1600 HST, Monday through Friday. No work shall be accomplished on Saturdays, Sundays, and all federal holidays without written permission from the Contracting Officer. Such written permission shall be available at the job site at all times during construction.

1.13 Environmental Protection

The work shall comply with the requirements of the State Department of Health Administrative Rules, Chapter 11-54 HIDOH Administrative Rules, Chapter 11-55.

Contractor shall obtain all required additional NPDES permits for construction activities (submitting a DOH Notice of Intent (NOI) to be Covered Under General Permit, along with applicable HAR Chapter 11-55 Appendix/Appendices (B, C, D, E, F, G, H and/or I). Contractor is responsible for all applicable filing fees (if required) and for preparation of required supporting documents.

As specified in Section 342D-11 Hawaii Revised Statutes, if the project has any storm water discharge before a Notice of General Permit Coverage (NGPC) is issued, the permittee could face penalties of up to $25,000 per day per violation. Contractor shall be fully liable for the entire amount of any and all penalties imposed as a result of his actions (e.g. if work is begun prior to receiving NGPC and the state imposes penalties for storm water discharge to the Government, the Contractor shall be responsible for all penalties).

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)